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SALE OF INVENTIONS

INVENTIONS

THEIR DEVELOPMENT, PURCHASE AND SALE

BY
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PREFACE

THIS book is essentially a manual on the marketing of inventions, and it is proposed to view the subject from various angles, proceeding from the less obvious to the known. In its broader aspect it is a book on business policy and is sent out on its mission of enlightening inventors and others about plans by the aid of which inventions may be profitably exploited.

It is intended, however, not alone for the ordinary layman without experience and worldly wisdom but for busy people in every line desirous of understanding the nature of patent property in inventions. The difficulty has been to confine the book within proper bounds and still leave nothing out which is necessary for passing judgment upon any invention, either from the standpoint of the originator or of the capitalist, investor, or manufacturer interested in working inventions.

The problems discussed are the manufacturers' problems as well as those of the individual inventor seeking to enlist capital for his new undertaking or to start a new business founded upon a new and useful invention.

The most potent word in our business vocabulary today is *efficiency*. Efficiency is simply a high ratio of results to means. Increased efficiency depends almost wholly on increased knowledge. The fallacy is now recognized of letting each man go along in

his own way and produce business by using only his own methods. This is a book to show one how to use the efforts of others to the best advantage in order to become a dominating factor. It is in sum and substance primarily written for the average man — for plain folks, not for geniuses. Geniuses do not need guiding. The idea of Wanamaker is, "All may help, none shall hinder." The aim of this book is to standardize the best way, the best thing, the best thought and see that all inventors know, practice, and use them.

In so far as it teaches the paramount necessity of self-help, the suggestions made are of practical value, and in so far as it discloses plans showing how to use the efforts of others to the best advantage, the injunctions given are indispensable. The majority of people have realized that the growth of income is not keeping pace with the growing cost of living. The man who never tried, never helped himself or any one else. The man who never made a mistake, never made anything else. The capitalist is ever sharpening his eye, spurring his ambition, and setting his mind to the task of increasing the income side of the ledger. He is keenly on the alert for the knock of opportunity when it comes. And then he is fore-armed and sensible enough to investigate, to search into its good features and its bad: to examine, analyze, and decide.

George Westinghouse first called on Vanderbilt to submit his airbrake. He was turned back with the rebuke, "I have no time to waste on new ideas." That remark cost Vanderbilt millions. That policy has had its day. It never pays to refuse to investigate.

The knowledge herein recorded was obtained by business men after the hardest knocks, and they were years and years accumulating the experience that is the reader's for a few hours' study.

Today, to be a success means constant study. Every line of activity will furnish ideas that one can use in one's business. The more serviceable knowledge one possesses, the better equipped will one be to win out in business. Life is a constant struggle anyway. It is good for people to strive, even desperately if need be, for a certain goal. When attained, it will be appreciated. Try to dispose of a patent in the right way, and it will not be difficult to succeed. It takes strength and power to get up and "keep on plugging" with the determination to win after you have fallen down in the race. But armed with concrete knowledge, there is no reason why the inventor should not succeed. Guessing is worse than useless. Germany has lost the war because she regularly misguessed everybody.

Patents are peculiar property and inventions are peculiar things. A patented article differs from ordinary commodities in that it has easily discernible characteristics of invention. It is not like bulk goods, which have no individuality. By its very individuality and superiority it commands recognition and demand; on account of its individual qualities it becomes known and its value becomes established in the mind of the interested public. If a man owns a patent on an invention greatly needed by the public, he is, on the average, pretty certain to begin its manufacture as soon as he reasonably can. He must, however, go *with* and not *against* the stream.

In order to avoid costly mistakes and not court failure, it is necessary to begin right. If a large number of inventions patented in this country since the dawn of patents have failed, the following may have been any of the reasons:

1. The claims of the patent were weak.
2. The invention would not work.
3. The cost of manufacture was too great.
4. The idea was feebly patentable but not sufficiently new.
5. There was no demand for the invention.
6. The big fellows froze it out.

It takes hard work to market inventions, yet almost every patent contains the germ of a successful, marketable device. Men have stopped too soon, or wasted effort and energy while staring success in the face. Few think of the hardship which every electric light, every piece of steel, every pane of glass, every telephone represents. It takes knowledge to make a business man, but it takes genius to make an inventor. An inventor can invent and sell, while a business man can only sell. If one works for \$15 per week, one probably would never save in one's whole life \$3000. That is why men invent; inventing is a step toward increasing income.

Such is the power of salesmanship and advertising today in creating the demand for patented things that people do not call inventors fools. After all, the flying machine is the living evidence that a "fool" invention may possess invaluable worth; flying machines have helped to win the present war.

It is hoped that the reader will find the precautionary pointers about preparing a patented article for the

market, estimating the value of patents, creating the market, and disposing of inventions, instructive, and those portions of this work bearing on advertising, salesmanship, and contract law, helpful, in answering any of the thousand questions that arise during the interval between patenting and disposing of an invention.

A word about the various methods considered looking toward raising capital to work inventions. How to raise capital to push an invention is the perennial question. This is what every inventor is after. Two prime considerations control, business and advertising. The one without the other is an anomaly. If the inventor has capital of his own to dispense with assistance from others, he is truly fortunate. In the vast majority of cases, however, the invention requires the interesting of investors. The question is how this may best be done. Raising capital is simply the art of selling the investor something, the very purchase of which carries with it an obligation to take you as a partner. It is therefore *salesmanship* — no more, no less. Genius can always raise capital. This book is intended to help the preoccupied workaday world to get its share of earthly goods by study, application, and hard knocks.

Nine tenths of those inventions which are sold are sold outright. The public must be reminded that inventions save money for the public. The public pays nothing for them — pays nothing for the development. The inventor must be reminded in case of any doubt as to the importance of the consumer in marketing inventions that many good firms exploiting a new and good article have been able to improve

the quality of their goods because the public have been with them and given them a chance, whereas if they had not done so, these firms would have been compelled to go out of business.

The manufacturer of patented articles naturally serves the consumer. A manufacturer is usually anxious to serve the consumer in his best interests. As a rule that is the best business policy for him to follow.

The dealer has got to make a clear profit on an article, or he cannot be expected to push patented goods. It actually costs the dealer today, taking all lines and bulking them together, seventy (70) cents out of every dollar for goods and thirty (30) cents in addition to this seventy cents for overhead expenses, or the cost of doing business.

In the logic of facts the capitalist or moneyed man comes last of all, not first of all, in deciding the market for any patented articles. The money interests are looking for men of character and not for money to start industries, and character in an inventor is his best asset, for it takes years, amidst prosperity and misfortune, to build up character. At a public appearance of J. Pierpont Morgan, before a committee of Congress, some one asked him how he determined to whom to make loans. He said: "The first thing I want to know about is the man's character. I have loaned millions to men who had little property and I have denied millions to men who had ample security."

However this may be, it is only after the inventor has made a mark in the world that money will flow to him from capitalists, and while every inventor is

not an Edison, a good invention may reasonably warrant the expectation of commercial success. A manufacturer of an article first puts his goods out as an experiment. He does not know whether he is going to make money or not. He may spend \$50,000 or he may spend \$500,000 in supplying such articles and still make no money. The article may not be good enough for the public.

W. E. B.

WORCESTER, MASS.

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CONTENTS

CHAPTER	PAGE
I. VALUE AND PRICE OF PATENTS	1
II. GAUGING THE MERITS OF AN INVENTION	21
III. TYPES OF INVENTIONS (THE COMMERCIAL SIDE)	31
IV. GLEANING THE TALKING POINTS OF INVENTIONS	35
V. HOW PATENTS EXCLUDE; PRACTICAL EXAMPLES	41
VI. DEVELOPING INVENTIONS	51
VII. SUCCESS IN INVENTING	56
VIII. THE DEMAND FOR INVENTIONS	61
IX. THE MARKET FOR INVENTIONS	77
X. PATENTS AS PROPERTY	92
XI. INVENTIONS AND INVESTORS	95
XII. INVENTOR AND CAPITALIST	105
XIII. OPPORTUNITIES FOR INVESTMENT AND FACTS ABOUT INVESTORS	112
XIV. THE PRESENTATION OF THE INVENTOR'S PROPOSITION.	118
XV. METHODS OF MAKING SALES	125
XVI. CLOSING WITH INVESTORS	140
XVII. RAISING FUNDS—THE RIGHT WAY VS. THE WRONG WAY—WHAT PLANS TO ADOPT	148
XVIII. ADVERTISING FOR CAPITAL LEADING UP TO A PARTNER- SHIP OR CORPORATION	167
XIX. SALESMANSHIP AND BUSINESS—GENERAL CONSIDER- ATION	184
XX. SIZING YOURSELF UP AS A BUSINESS MAN	190
XXI. ELEMENTARY CONTRACT LAWS	196
XXII. MISTAKES OF INVENTORS	204
XXIII. THE SAFETY VALVES OF MARKETING INVENTIONS.	207
XXIV. SUGGESTIONS FROM THE AUTHOR ON EVERY PHASE OF SELLING INVENTIONS	212
INDEX	221

SALE OF INVENTIONS

CHAPTER I

VALUE AND PRICE OF PATENTS

WE assume one has a patent issued to one by the United States Patent Office on an invention which will sell. What is the patent worth? What is its cash value, as near as it can be estimated?

Whether one sets his own price or it is named by his backer makes no difference, for, like water, patent prices tend to maintain their own level. It is not easy to fix the price of a patent even when knowing the characteristics and model conditions which give it value. In buying real estate, one would, before accepting the deed, make oneself conversant with every advantage and disadvantage which the property possessed. But a patent is peculiar property and should not be confused with the invention the patent is designed to protect. The invention is one thing, the patent another thing; the selling price of an invention is not the selling price of the patent.

A patent does not give an inventor a right to make and sell his own invention. This is a nice perception. He always had and has this right, patent or no patent. A patent simply gives an inventor the right to exclude others from making, selling, and using his invention. It makes the inventor master of his own domain, and if he chooses, he does not have to make his invention at all. But this right to exclude others is or may

be priceless. If one sells goods, one would naturally want to shut out competition. Wouldn't one like to make every one buy at one's store? That is the way to accumulate profits quickly.

The output of all the gold, silver, and diamond mines in the world does not equal, in value, the profits earned from American inventions. It is not correct to say that a patent gives value to an invention, because it only secures exclusively to the inventor the value which the invention already possesses. Therefore, in addition to owning a patent one must have an invention which will sell. The possession of a strong patent lies at the root of every valuable invention. A strong, clean-title patent is the foundation of wealth and fortune in inventing. If one has an excellent invention, but one's patent claims are weak, the chances of making profits are very slight. Now inasmuch as no inventor can tell how valuable his invention may become in future years, however spiritless it may seem offhand, it follows that everything should be sacrificed to obtain a good, substantial patent on the invention. No matter what the meritorious invention is, good patent claims can be obtained to protect it, and when obtained, they will determine the measure of protection accorded the inventor. Otherwise there will be nothing to boast of.

To show the utter futility of trying to realize profit from any invention without obtaining the right kind of patent protection thereon, it may be added that the nature and qualities of an invention determine its excellence and merit: The merit of an invention bears on the amount of public favor it generates; the nature of public favor affects the demand for an in-

vention; the demand controls the market; the market is affected by competition or its absence; competition generally determines how many shall divide the profits, and a patent spells out the possible amount of competition that may be expected.

The price paid for a patent will, therefore, not be confused with the price charged the consumer for purchasing the article patented. The cost of manufacturing a patented article does not control the cost to the manufacturer of the patent rights, but the cost of patent rights to the manufacturer determines the manufacturer's share of profits after deducting the cost of manufacturing the invention.

The better the invention, the greater the demand; and the greater the demand, the fiercer will competition be, unless a patent shuts out competition. Therefore it is safe to say that the more merit an invention has, the smaller will be the price paid for the patent if it does not check competition; but if the patent does stop competition, then the price paid for the patent is bound to go up.

The invention and the patent must both be good. What is and what is not good may be elusive and defy analysis, but to illustrate, we will give a general test by which one can "tell." The cost of introducing a patented article — however superior to other articles — into the market must be deducted before positive elements enter into the make-up of the price to be paid for the patent. So an invention may be good and yet not as good as it seems. Similarly the cost of maintaining infringement suits will lessen the manufacturer's profits, so that a patent may look good and turn out to be bad. One must not look only

on one side of the shield. Whether it is a poorly paying invention or a poorly protecting patent standing in the way of profit, one can generally find out by investigating and without spending much money, assuming again that the invention will sell at all. It is the purpose of this book to show how to do this.

It is purely a business proposition to estimate the price of an invention. There should be no miscalculation. When a manufacturer buys an invention, he is seeking value received. His only consideration is whether he can make a profit from the sale of the invention *over the price paid for the patent*, plus—what the inventor usually neglects to realize—the investment in tools, machinery, and the cost of introducing the invention. He does not want to buy a blunt tool.

Every buyer of a patent who intends to manufacture under the patent, tries to discount the future. There must be clear gain looming in the distance. His bid is not based on the profits he expects to make the first year but after the expiration of a certain number of years. *His effort is to wipe out the cost of a patent through his profit as soon as possible.* He naturally supposes that the chances are more than even that some other inventor will obtain the same results by some other method, if not by a servile imitation. In such event he cannot hope to prevent competition.

To cut out competition for the present or for the future is an important consideration in any industry working under a patent. Patents are purchased because they are directed to prevent competition, and it is always a question just how much competition a patent will prevent. One patent may infringe another

patent; in most cases a later patent can or may infringe an earlier patent, but in some cases an earlier patent may infringe a later patent.

A patent defines the "boundary" between one patent and invention and another patent and invention. The patent attorney and the examiners in the United States Patent Office coöperate, while an application for patent is pending, to make a survey so as to fix this "boundary." No inventor has the right to ask for more protection than he is entitled to receive; certainly not to seek to cover and protect a device or construction already patented, or perhaps not considered as patentable at all. The Government says to every inventor: "Present your claim or claims; write out a description of the particular thing or parts of a thing or article you claim to have invented; state clearly and accurately what it is you claim is new and what you would prevent others from making, using and selling, after you get your patent." The patent virtually gives one a swimming belt.

The Patent Office represents every patentee, living or not living; the patent attorney represents the particular inventor. Views are exchanged as to how much protection, if any, should be accorded an inventor. The Patent Office will attempt to reveal to the patent attorney every patented device of a similar nature to the one upon which claim for protection is asked and request him to see to it that no claim is asked which would trespass upon some previous patentee's rights.

Of course mistakes are sometimes made by the Patent Office officials in granting patents which infringe other patents, but this is rare. The Government

does not guarantee any patent it issues, does not assure the inventor that it may not infringe some later or earlier patent. But on its face every patent shows that some inventor has been accorded protection on an apparently new and original invention.

Suppose the patent which was issued for the first phonograph claimed protection on means for recording sounds, not specifying how the sounds were produced or in what manner recorded. The Patent Office is then asked to grant the inventor a monopoly on any mechanism for recording sounds. Representing all previous patentees, as the Patent Office does, it calls attention to the previous patents on telegraphy, where means are also provided to record sounds. The telegraph sends and records ticks, while the phonograph records human, vocal, or other sounds by indentations on a wax disk or cylinder. What right would one inventor have to prevent another inventor from making the former inventor's broad invention? He ought to be satisfied to make his own invention and to prevent others from making exactly the same invention.

The Patent Office will make each inventor restrict or limit his claims to his true invention or improvement, in this case recording vocal or other sounds. But one inventor invented the telegraph before another inventor invented the phonograph, and if the latter has a claim in his patent on means for recording sounds, the Patent Office would then see if there are any previous patents showing *any means* for recording sounds in *any manner*. If there are no previous patents, and the thing is the first of its kind ever invented or in existence, no one can exclude the inventor entitled

from obtaining his broad claim on any means for recording sounds in any manner.

As already explained, a patent simply gives one a right to exclude others. This is the only right it confers. If one's patent comes ahead of or was issued before another, one could exclude the latter patentee from making any device covered by one's claim and even exclude him from making a patented improvement over one's own device. It all depends upon the wording of the claim and how the claim expresses the structure upon which one has obtained a monopoly. When the broad patent has run its course, it is open to all.

But if there is a patent ahead of one's own patent, one may find oneself unable to make the patented invention, because the prior patentee may have a claim giving him the right to exclude others coming later. Thus one will readily perceive that one patent may protect an invention *broadly*, giving the inventor a monopoly on every kind of machine or device operating to perform a certain function, and another patent may protect a similar invention or improvement *specifically* so that, during the life of the patent having the broad claims, the owner of the improvement patent will not be entitled to make his own invention because it infringes the broad claims of the previous patent. But he can make his improvement after the patent covering the broad claim expires, because then this patent will become public property; that is, any one will be free to make this invention. In other words, a prior patent may exclude a later patentee who may exclude a still later patentee. This makes the last patentee live in a sort of glass house!

But we are assuming that a patent contains claims which afford adequate protection to an invention. Easy to say, but not easy to do. It is a hard thing to express or define in words the exact boundaries of an invention, as one must do in a patent claim. Patent attorneys, patent lawyers and experts, and the Patent Office officials realize, at times, this great difficulty. Language is a slippery thing. Then again it is the positive duty of the applicant of a patent or of his attorney to present such claims as the applicant desires to protect. The Patent Office officials merely pass upon these claims. It is a strict rule of patent practice that what an inventor, through his patent attorney, does not claim in his patent, "he dedicates to the public," i.e., he surrenders to the public. Therefore, if an attorney neglects to file claims which protect an invention broadly, where he is entitled to them, the patent will issue without broad claims and the result will be many infringements of the device and much *needless competition*. Again, one may unnecessarily limit one's claims by including features which have nothing to do with the real invention, but which, according to strict rules, being mentioned in the claims of the patent, the law will and must assume were considered by the inventor as material. (This will be explained specifically elsewhere.) Therefore, such claims will extend a direct invitation to an infringer to omit these unnecessary features mentioned in the claim and so escape infringement and introduce a ruinous competition. A patent which thus fails to protect is a bit of mere waste paper.

It is not the writer's intention to write a treatise on patent law, but enough has been shown, it is

believed, to indicate the importance of every inventor's engaging the services of a patent expert to prepare the right kind of claims which will protect every feature of an invention. It is the wisest and safest course for the inventor to pursue. Any reputable patent attorney is ready, upon request, to investigate the Patent Office records to see if there are any prior patents showing features embodied in an invention before one applies for a patent, and after he makes his "search," he will make a report as to its patentability. *But one should specifically ask the patent attorney to inform one whether, in the event of obtaining a patent, there are any patents standing in the way of constructing one's own invention.* He can decide this point, and if there happen to be such a patent and one's invention is an improvement thereon, one should none the less apply for a patent on the improvement, because the *patent would exclude the previous patentee from making one's own improvement* just the same as his patent might prevent oneself from making it. If this improvement makes his article better and there is profit enough for him in manufacturing the improved article, he will be glad to purchase the patent and so become the owner of the two patents.

By all means see that good claims are allowed *before the patent issues*, because it would be too late to grumble afterward. One will never regret engaging a capable and reliable patent attorney or lawyer.

Obtaining the right kind of patent protection — the most important step in realizing profits from inventing — is what the inventor must do for himself. He cannot ordinarily rectify any failure to do so after the patent is once issued; the proper time to act is

before he accepts a patent. The work of estimating and finding a market for the patented article may fall upon the manufacturer or upon the financial backer, upon the master spirits of the age, but first of all must come good patent protection. It is up to the inventor to get it. The manufacturer expects him to get it, and if the patent offered for sale contains no good or strong claims, that is the end of the matter. Therefore, be careful as to the wording of patent claims. Formulate them so that they will actually exclude rivals from making and selling the invention. An inventor who aspires to be, some day, in a position to receive royalties himself from succeeding inventors must be exceedingly careful in the wording of the specifications for his patent. Purchasers naturally look to obtain broadly covered patents and take the opinion of experts as to the scope and novelty of any patent *before they think of purchasing*, or even before setting the price, since the actual value depends, to a large extent, on the scope of the patent claims. Purchasers do not wish to expose themselves to lawsuits by leaning on broken reeds.

To succeed in interesting manufacturers one must be able to furnish information on the scope of the patent and, most important of all, whether in view of prior patents the invention can be made without infringing them.

It is hoped the reader will not fail to realize that what an inventor has to sell is not the mechanical construction, however good, but the patent claims which protect the article or process of manufacture; also, that it may not even be possible to make the device owing to prior dominating patents, causing an invention to become an

infringing device. The reader should know, too, that only when the patent well and truly covers all the patentable novelty that there is in an invention, will the full value of an invention be secured to the patentee and be represented by the patent. But just in proportion as the invention is deficiently protected or features of novelty, omitted or not fully developed in the statement of invention, by so much will the patent be reduced in value, until in such lamentable cases where the patenting has been so badly done that the patent cannot be upheld at all, its value will be absolutely nil.

But with the limitation that it is possible for a good invention to sell well and yet earn no profits because of excessive competition, so that the price paid for the patent will be small, it may be laid down as a safe rule that, once assured of a market, the success of the invention, under proper management, is certain. The management and the market are two factors which must be considered, because they are interlinked in so many ways that one without the other can hardly be said to exist. It is necessary to deal with people in selling inventions. *If the right kind of a man gets hold of a business, it succeeds. If the right kind of business firm with the right men get hold of an invention, it will also succeed.*

Every patentable idea and invention must pass through six cardinal tests:

1. As regards patentability.
2. As regards mechanical practicability.
3. As regards its possession of superior merit and low cost of production.
4. As regards a large and constant demand for it.
5. As regards being better, cheaper, and more

salable than other devices already on the market.

6. As regards the competition it will encounter.

These factors, when carefully analyzed, dwindle down to a consideration of the *article* and the *market*. It is the policy of good management to see that there is a good market for a good article. As to the article, the consideration of price enters *because of the cost of producing this article*. As to the market, the consideration of price enters because of the *cost of introducing this article into the market*. Good management requires that an article be manufactured in good and acceptable form, but as this is true whether or not the article is patented, it is necessary simply to add, in this event, that good management sees to it that the patent is a valuable one in its competition-shutting feature. The most important aspect of the article, viewed from the standpoint of cost of production, is its *merit*; while the most important aspect of the article, viewed from the standpoint of introduction, is the *demand*. This brings us face to face with the question of merit and demand. Three features will be briefly discussed as to merits, and they are the following:

1. The *quality* of the article, by which is meant the peculiar advantages the article possesses.
2. The *condition*, by which is meant the appearance of the article, the state of completion, effectiveness, and durability, in point of construction and use of the same.
3. The *time factor* of the article, by which is meant the time which must lapse or which it will take before an article will bring back profits,

depending on its nature and characteristics, development, experiments, etc.

All these elements enter into the cost of production or the cost of manufacture. When this end is well taken care of, the question of demand steps in for primary consideration. The controlling feature of demand for any single article or invention is, of course, competition; and this depends as much upon the supply of the article as upon current market conditions. The entire question, although naturally complex, will be simplified by an example.

If one has an article which can retail for five or ten cents — simple in construction and inexpensive to produce — and can get the five and ten-cent stores to sell it, one will find this often the easiest road to success. Take the Woolworth chain of stores for example. The method of taking up an article of this nature with this concern is as follows: The inventor will take the article to the manager of any branch store, explain its merits, and satisfy him it can be sold for this price. (Question of cost of manufacture, quality, condition, and time.) Never mind about actually manufacturing it for him. The manager, if he thinks it worth while, will send the article to the general purchasing agent, who has his office in the Woolworth Building in New York City, where the main office of the concern is located. The purchasing agent, in turn, will investigate the article and its marketing conditions — process of manufacture, probable demand, consumption, repeat orders — and reach a decision as to whether it pays to handle it at all. This is the crucial point; because once he decides that it does pay to handle it and he takes it up, there is

laid before the inventor as an outlet and market for the article, one of the largest selling organizations in the world, reaching millions of purchasers, an organization, too, that has a small selling expense. This is the reason why it usually pays to invent an article like a pin and other similar money-making inventions.

Of course it does not necessarily follow that, in order to be good and meritorious and sell fast, an article must be simple. *But its simplicity over rival articles is a matter of so great importance that it cannot be emphasized too strongly here.* In other words, the *condition of an article*, as explained above, is most vital. To place an article of *quality in condition*, takes *time*. All the really important things have taken time and patience to bring to perfection. Thus most any inventor who finds himself making quick profits may be sure that they will be short-lived, although this may be a good thing while it lasts. Confidence, tenacity of purpose, and capital are the requisites for building up big fortunes or the foundation of a patent, but the thing itself must have intrinsic merit. The simplest inventions are the best money-making devices for no other reason than that it takes less capital to put them on a successful profit-producing basis.

The real value of a patent is the net value of the monopoly over ordinary trading profits, and when followed by estimation on likely instances of uses during the time of monopoly (seventeen years) and deduction of cost of introduction and of maintenance of patents, will give the estimated return from the patent during the term of the grant.

The value of use is the advantage possessed by the invention over previously existing devices, methods,

and machines in use with the same object. It is capable of exact calculation and expression in terms of value. Thus whether a machine or process, the advantage may be in the decrease of initial cost of construction or of installation, decrease of working expenses, improved number or quality of vendible or usable product — any or all of these. The advantage in each case may be expressed as so much monetary saving.

Instances of Use. — To determine the extent of the probable employment of the invention, statistics will be necessary from which may be learned the volume of trade in or from similar articles or methods which the invention is designed to supersede. If the invention is for use in production, an estimate should be made of the number of producers likely to be influenced to abandon the old for the new process — perhaps more or less dependent upon the amount of profit in favor of the new invention, and the persuasiveness of the introducer.

The Present Value. — The present value of seventeen years' equal profits, say at ten per cent, is about twelve and one half times one year's profits. Ten per cent must, however, be considered as a somewhat small return for such a speculative investment; and moreover, it is frequently found that the profits are less in the beginning than at the end of the term of patents. Probably four or five years' purchase would be a fair amount in average cases; but still the amount must vary inversely with the probability of further improvements arising to oust the invention from commercially profitable use.

Know the exact costs of selling the patented article.

While it never is practicable to determine this until an article is actually manufactured, every effort should be made to secure as accurate an estimate as possible during its preparatory consideration. The smaller the selling price and the more liable the article to meet competition, the greater the care necessary in making the estimate. Tabulations of every part and its cost should be made either by the inventor or by a competent person selected by him.

Inventors fail to attain success by omitting to balance the cost and profit. Some design articles of manufacture only to find that the cost of manufacturing them is greater than the cost of manufacturing other articles of a like character. Many have considered things to be advantages which have not proved so in practice. One should not be misled. It is far easier to estimate the value of licenses than the outright value of patents. Sometimes the use of a machine of a particular size will govern the amount of license to be charged. For example, one could sell an invention in the manufacture of steam turbines of less than a thousand kilowatts to one man at one price and a license to manufacture steam turbines of over a thousand kilowatts to another man at another price.

A good way of estimating the value of a patent, without actually proceeding to manufacture the article, is to get a first-class model-maker to construct it. To get the right price of a patented article, send the article to users with requests for their opinion after a few weeks' use. If the reports are favorable, the price should be figured out on a regular manufacturing scale with all labor, material, and expenses of management included. In this calculation it is best to make

the price on the basis of contracting the work out, and applications for estimates for furnishing the article should be made to firms equipped for the manufacture of this kind under contract. If the estimate of cost thus obtained exceeds that which it is ascertained can be got from the wholesale jobbers, then either the invention must be altered or abandoned. If altered, it must be capable of manufacture at a lower price. In most cases this simple matter of addition and subtraction with a small ingredient of exertion has not been gone through at all, and the inventor merely proceeds upon theory rather than upon facts which he can easily ascertain in advance. Those not familiar with the cost of construction in manufacturing, little realize how important it is to save cost in small details. The reason is that the intense competition of the open market leaves at best but a narrow margin for profits with most articles, and large profits are made by the use of cheap processes of production and large quantities of articles sold.

It should be borne in mind that a first-class model-maker will not set a fixed price on any work he may undertake in the nature of constructing a full-sized or working model for any inventor. He will inform the inventor that considerable experimentation may be necessary in preparing the article in an acceptable condition in order that its entry into the market may be consistent with the earning of immediate profits. Furthermore, a high degree of merit should be attained in this trial for the public approval. After a model has been finished, embodying the best methods of construction known to the model-maker, things will be in a condition for estimating the price of the

article, and a suitable basis for a royalty arrived at. The model-maker will base the cost of making a satisfactory article on the material, size, and make-up of the invention, and on the amount of machinery employed and skilled labor used in its elaboration. However, the consumer practically controls the price at which a patented article must sell and incidentally the price of the patent itself.

If an inventor, having control of his monopoly, overestimates the worth and importance of his invention and sets his trade price too high, it means that he restricts his volume of sales and volume of manufacturing production. He will therefore be careful to fix his price at a point where he expects the natural law to bring him great returns on his invention, but he is also concerned with the price at which his invention reaches the public that it may include a sufficient profit to repay the dealer for the investment and effort he must put forth in selling.

In another chapter the factors determining the cost and selling price of patented inventions will be fully discussed. Thus in the present chapter it suffices to consider the question of price only where the controlling or deciding factor is competition based upon a patentable monopoly.

Remember that cost is always a relative term, never absolute. The cost of making the same article, in different factories, is always different owing to the difference in "factory-overhead" expense, cost of labor, and selling expense.

The price to be paid for acquiring a patent thus depends upon the distinct advantage the manufacturer will obtain in exploiting it. Chief among the inci-

dental or indirect advantages is the fact that price-fixing generally becomes important in the case, of patented articles. It is proposed here merely to hint at this consideration, as the topic will be discussed elsewhere. Then again the very fact that prices are fixed is a guaranty that they are not fixed too high in the long run. Suppose the maker of a patented article does place an unreasonable price upon his product, what results? Since no one is compelled to buy except by choice, the article does not sell. If it does, it is worth the price in the eyes of the buyers in exchange for the improved service it renders; and if an article does sell in satisfactory volume at any good and fixed price, it is proof that the invention has made a contribution to society more than equivalent to the returns expected.

The estimated commercial value of an invention is the value of the superior efficacy of the invention over the best of its competitors in each instance of its employment, multiplied by the number of instances of its employment or likely employment and by the time during which it is likely to have preëminence. It is impossible to calculate beforehand the absolute commercial value of any invention, because, although its value over competitors may be stated with exactness, the *number of instances of its employment, rate of output of product, and its duration of use* can hardly be determined and must be conjectured more or less accurately according to the practical experience of the calculator.

In closing this chapter, it will be necessary to discuss the depreciation of patents in point of value. At present this subject is more or less shrouded in mystery to many, but as a rule the depreciation of

patent values occurs most rapidly the first years of their existence, during which years the greatest profit is derived from their application or use. This fact should always be borne in mind.

A great number of patents are of little value after the tenth year, and most manufacturers take this condition into consideration.

A patent remains an asset as long as it has not become obsolete. In fact, it is much easier to establish the real value of patents than the theoretical value of good-will. While it is not easy to anticipate and forejudge the productive life of a patent, the best way is to maintain a reserve fund to take care of patent depreciation, in the same manner as reserves are maintained for plants, buildings, machinery, etc. In this way, during the legal life of the patent the purchase price is always borne before the observer; but the amount added continuously to the reserve fund will or should more than equal the purchase price of the patent.

A few years ago a manufacturer of automobile engines purchased a patent at a cost of fifty thousand dollars. He estimated the useful life of this patent to cover a period of not more than four years, due to the rapid development of this class of engine. He finally decided to write down the value of this patent on a royalty basis, and add it to the cost of production at the rate of one dollar for each machine. At the end of eighteen months the original cost of the patent had been absorbed in the production cost without reducing his net profit over that of former periods. This patent had not as yet become obsolete, but he adopted a sound policy, to which the condition of his business will testify.

CHAPTER II

GAUGING THE MERITS OF AN INVENTION

THE spirit of the times demands merit in an invention, and financial remuneration for the inventor requires it. The whole tendency of the present industrial age, the manufacturing spirit and competition, which is most strenuous even in industries which rely upon and work under patents, forces the use of the best instead of any inferior devices. It is human nature to take advantage of a trade—if the seller does not know values—and also to break off negotiations if he is asking an exorbitant price. This is true as long as the value of the article is unascertained. If the inventor does not know what he has to sell, he cannot expect others to go to the trouble and expense of finding out.

It is capital the inventor wants all the time, but merit must come first. The simplest way to test the merits of any invention is to find out first if it has intrinsic value and then, if so, whether it is an overnight affair to recognize this value or a prolonged matter based upon comparisons made with similar articles.

Eliminate all sentimental feeling in connection with any invention. Be its own worst critic. One should adjust one's viewpoint toward it so that instead of its becoming a part of oneself, as so often happens,

one can, figuratively, criticize it through the eyes of one's unfriendliest acquaintance. The inexperienced inventor will at times cover up a known defect, refuse to admit it even to himself, in the hope that no one else will discover it. This line of reasoning must be gotten out of one's mind instantly. Every invention has or will develop a competitor. He will find the defect. What is the use of deceiving oneself when to do so results to one's own misfortune?

Some inventions drag along for years without getting to a paying stage and then suddenly make fortunes for their owners when the patent is almost run out. The typewriter is a practical example. Some of the most promising inventions are those which *cannot* be realized upon immediately. They are in advance of their age. It is well known that there is very little money now in surface washing or placer mining for gold and that all the big profits are made out of long and patient development of deep mines. The same is true of patents. The patented devices which sell like pancakes are only surface washings; they are not all up to the mark either.

It is capital all the time with the inventor. Merit will win capital to be sure, but initially and primarily, capital will breed merit in any article and will infuse new blood into its sale. In patented articles the labor element is most important. To assure success, the inventor must commence right. He must pursue his invention like any business, but only more steadily, because he must strike out with something new. It has been aptly remarked "that the great secret of success in life is for a man to be ready when his opportunity comes," and this applies with great force

to a patentee. But "a wise man will make more opportunities than he finds." A patentee is the sole proprietor of valuable property. His position is similar to a man possessing a rough diamond needing polishing. It takes machinery to make a machine — a shop, workmen, and materials. And these cost money. As explained before, one cannot tell whether an invention is really valuable until it is made in a shop and finished. It is an almost unheard thing for an inventor to succeed single-handed. He must have the necessary capital.

An article must have some merit to win out, unless it is a nine days' wonder merely. An army of experts cannot make a success of a poor scheme. Perhaps the work of every inventor will not turn out meritorious, but for the sake of finding one genius we can well afford to tolerate a multitude of ungifted inventors, as no one knows whence the gifted inventor may come. As to degrees of merit, it is not always mechanical superiority which counts. An inventor often assumes as a sort of rough guess that an article with slight superiority will secure a hundred per cent of the total consumption, while as a matter of plain everyday fact, a satisfactory article with good distribution and management is often a far more attractive asset than a superior article without accompanying financial aid and knowledge of merchandizing. Again, what counts is business that can be held at a reasonable sales expense when once secured.

The merit of any article newly created is seldom determined by one man. The inventor should, therefore, seek the opinions of those qualified to pass upon the merits of his invention. It is necessary to know

who are and who are not thus qualified. Who could forecast the immense commercial advantages of the telephone and other epoch-making inventions? It frequently happens that an exceedingly important invention and one which can be fully protected under the patent law differs so little in its general appearance from the drawings of prior patents, that an unpracticed eye is unable to detect an important distinction.

The best way of finding out the possible value and merit of an invention is by consulting people right in one's home town. If they think the article is good, one can use them in connection with one's plans to raise capital later on. If the device is a railroad appliance, consult the men in the repair shops in the vicinity as to its merits, as they are good judges. Do not sink money without an investigation. The local hardware man is a good judge of the usefulness of any ordinary tool. Practical people, living all around you, can and will give excellent advice. Go to the man at the top, the successful man. One can stand criticism of one's invention, and if after hearing it, one's confidence is unshaken, there's every chance to win. If one's idea is any good at all, it will come through this trial of criticism. The heads of every line of industry know everything vital about their arts; anything moderately good that suggests bigger profits is what they want; and when they find what they want, they have financial friends who have confidence in their judgment.

By all means, let the model itself speak in favor of merit, otherwise it may be too late to induce action on the part of manufacturers; but consider carefully

to whom to show this model for an opinion of its merit.

Marketing an invention depends upon the situation of the inventor himself with respect to parties interested. It depends upon his business environment, his business acquaintance and standing in the business world. In many cases a mere idea in itself is not attractive to the investing public. In most cases it is necessary to have a model made. This model, if made, should perform its work without a hitch. However, capitalists and investors — as distinguished from the manufacturers — are not as a rule mechanics and are not concerned with the inward working and combination of parts of the machine. What they want is results. Hence it is necessary to bring the invention to a state of practical perfection before an attempt is made to enlist capital. Of course, in showing one's ideas to men conversant with such devices, the patent may suffice. For example, if the invention is a tool, send the same to some large hardware dealers with the request for an opinion whether they could sell the article and at what price in wholesale lots. A few samples might also be distributed among practical machinists.

It is axiomatic that the simplest inventions are the best money-makers.

The collar button that turns down at the back produced a big fortune.

Harvey Kennedy introduced the shoe lace and made \$2,500,000.

The ordinary umbrella benefited six people by \$10,000,000.

The Howard patent for boiling sugar proved a lucrative investment.

Sir Josiah Mason, who invented the improved steel pen, made a large fortune.

The inventor of the shading pen had a yearly income of \$200,000.

The wooden ball with an elastic attachment yielded over \$50,000 per year.

The lady who invented the baby carriage realized over \$50,000.

A young man of twenty-seven invented the veneer put upon shoe pegs to keep them from splintering and received \$200,000. The man who discovered that a newspaper wrapper could be gummed and applied this knowledge in a practical way by patenting the process, made a fortune large enough to enable him to found two schools for boys. Tom O'Toole, the miner who couldn't keep the pocket flap of his trousers buttoned in the usual way when filled with the tools of his trade substituted metal eyelets and hooks for buttons, and that little invention made him independent for life. Canfield became rich when he devised a seamless shield for women's dresses. Denison gained a big fortune for his idea of a shipping tag with an eyelet reinforcement. The everyday can-opener is a little invention that is profitable. The DeLong hook and eye was a clincher from the very start. A thumb latch brought wealth to two New Haven men, Philos Eli and John A. Blake. The automatic inkstand was worth \$200,000 to its originator. Joseph F. Glidden, who invented the barbed wire fence, made a million in royalties. A flying top of tin with wings which flew up in the air earned a good-sized fortune. "Pharoah's serpents," an odd sort of firework, put \$50,000 into the pocket of the

originator. And more recently, Dr. L. F. Adt of Albany, N. Y., the inventor of the Shur-on eyeglass, realized big gains therefrom. A humble workingman who devised a stylographic pen that would shade in different colors got \$100,000 within a year from his invention. Yet these inventors were not professional inventors. Some merely stumble upon their ideas, and their devices prove "masked batteries" as it were. The remuneration to the inventor of a simple meritorious invention is not always by way of a direct purchase. Thus an inventor in the employ of the Bissell Carpet Sweeper Company of Grand Rapids, Michigan, was paid a salary of \$5000 a year and a commission on every dozen sweepers sold for a great many years. He was taken from incompetence, died a wealthy man, and his family today are well provided for.

The inventor should understand the relation between value and merit of an invention. Value, while based upon merit, is conditioned upon personal initiative. Get the right perspective. This applies both to the inventor and exploiter. The one is prone to be too enthusiastic and the other too conservative; but when both yield a little, it will mean attaining a fair estimate of an invention. Inventors are not all cranks, as the joke pages of the periodicals would have one infer. True, they are enthusiastic and properly so, for had they not been, many of the greatest inventions of the age never would have gone beyond the experimental stage. It is for the buyer of inventions to temper this enthusiasm with that amount of conservatism which will "bring him back to earth," but not to the point of belittling the invention if it is a

good one. No inventor with a good patent will permit it. He is liable to take it elsewhere to the discomfiture of those interested if this method is being pursued to "beat him down" in price.

The difference between a staple article and the patented improvement on that article is usually expressed in terms of merit. It will usually take less time and effort to push the article of merit. That is why an article with the least merit will always pay the greatest amount of commission. The manufacturer who markets an article that has genuine quality cannot afford to pay large commissions.

This superiority of a patented article over a mere staple is a good presumption and arises from the fact that an inventor must get a point of advantage over the whole world, because, if the patented article has been used before and has become known to the public by prior publication or by public use in this country, the patent is void.

The inventor who blends in himself the dual character of an originator as well as capitalist is on the nearest road toward success. He does not worry about getting started right or raising capital. The patentee addresses himself to the public from whom he expects support. But is it always necessary? Sometimes the failure of an inventor to realize on his invention is due to the lack of thrift. There seems to be implanted in the breast of all great inventors an indomitable spirit which generally enables them to overcome all difficulties. The inventor who does not feel that he possesses this invincible self-will must endeavor to acquire it. There is no particular secret of success in inventing any more than there is

in anything else; the tradesman who spends less than he earns, may in the course of time become a capitalist. The foreman may, after the lapse of years, come to be a master, etc. Almost all of the great business enterprises owe their origin and their continued prosperity to the fact that their founders were patentees.

In the nature of patented things it will often be found that things which are useless in one way become useful in another way. A device may be without value in one art but of immense value in a different art; e.g., a nonrefillable bottle may not be practical, but it may contain the germ of a good invention of a check valve.

It is necessary to know how to take advantage of the merit inhering in any article or thing. There is only one way of going at it successfully and that is by thoughtful work. If one is the inventor of an article he should forge ahead and find out how to get the right talking points, as it is a fact that patents, copyrights, and trade marks often furnish the groundwork for a great number of telling arguments. An electric machine may be the basis of a hundred or more controlling patents. The machine may be "talked up," along the lines that these patents not only protect but shut out any competitor from making any machine approximately as good, etc. If one is commercially inclined and wants to become a capitalist, he should begin by marketing an article of merit. Remember that the brightest minds in the business world are endeavoring to solve the problem of how best to market an article. To start with little or no money, build up a business, equip the

plant, buy raw materials, hire help, manage a factory, establish credit, advertise, fill orders, collect accounts, and do the thousand and one other things necessary to make a success of a business requires a good virile mind, plenty of hard work and close attention to details, and should be a steady, gradual development. Let every inventor adopt the motto, "This one thing I do."

If one is mechanically inclined and wants to become a capitalist, let him take hold of a meritorious article and seek to improve it, thus becoming an inventor himself. It is simply necessary to know what articles on the market succeed because of merit. It is interesting to know that about four hundred patents were taken out of the patent office on safety razors since Mr. Gillett's invention. The owners wanted a part of his success. The Gillett Company spent four million dollars in advertising their article and educating the public to its use.

CHAPTER III

TYPES OF INVENTIONS (THE COMMERCIAL SIDE)

INVENTIONS are not all of the same character. There are various types of them. We are concerned only with those types which will spell success from a financial standpoint. But regardless of the type of any particular invention, what counts is the amount of personal initiative of the originator. A test of a patent is its practical application. The reputation of an inventor, unlike that of an artist or a writer, counts for nothing. Every new invention made by him must have commercial value and must be successful. It may make the financing of a second invention easy, but it will not sell it. Each invention must stand or fall on its own merits. People will not make a stir about inventions which have no merit.

There are simple types and complicated types of successful inventions. An invention belongs to the simple type when its construction embraces a minimum of parts and when at the same time its pushing calls for no extraordinary expedients. As an example of a simple invention, take the bottle cap. Every time anybody in the United States pulls off the cap of a beer bottle or soda water bottle to quench his thirst, he pays a fraction of a cent into the pocket of one William H. Painter of Baltimore. This gentleman,

however, carried his patent in the pocket for six years before interesting capital. Finally he succeeded and today he is a millionaire many times over.

This is an ideal example of a simple invention, because it illustrates the great truth that to go out of the beaten track and make an invention pay, one must have an article of merit which must run the gauntlet of repeated rejection until the day of final triumph. The complicated invention, however, on the other hand, not only is more unsparing of parts, but the effort, labor, and time expended to push it may be tedious. Look at any complicated piece of mechanism. Invariably you will find half a dozen patents on the individual sections of machinery—half a dozen ideas so interwoven that while by analysis one can separate one from the other, one cannot, in looking at the section, pick out one patented combination without seeing at the same time two or three more patented combinations interwoven with it. So much as to mechanical perfection. Still if such mechanism have merit, it is worth while producing as the rewards for inventing something for which the world needs are so great that the toilers in the ranks need never grow discouraged. A single invention may make a huge fortune for any inventor. Any one may be the lucky one if he is strong-minded enough to push his invention rightly. Most sweeping, revolutionizing inventions belong to the complicated types, especially as concerns the feature of successfully introducing it into the market. Some revolutionizing inventions were not worked out in the United States. The Diesel engine, the internal combustion engine, blast furnace gas engines, and electrical smelt-

ing furnaces were all invented abroad five years before ever used here. The pioneer of the steam turbine, Dow, could not get capital in this country to market it here and he had to go abroad before he could get it.

The best type of invention, therefore, whether simple or complicated, is that which eliminates the most factors of uncertainty in establishing a market for it. It is for this very reason that there are many businesses in the United States that have been built on the inventions of their presidents. The industry of the inventor in producing, and patience and good judgment in exploiting the invention have contributed to eliminate the natural timidity due to dependence on others for direct instead of indirect support.

Here, then, are a number of commercial points about one's invention which will prove of advantage to every inventor. As far as the marketability or salability of an invention is concerned, inventions should be classified as follows:

- A. Inventions which save labor.
- B. Inventions which save time.
- C. Inventions which save trouble.
- D. Inventions which save money.
- E. Inventions which save annoyance.
- F. Inventions which consist in giving a salable product or article superior merit, where the merit may be:
 - 1. Added service.
 - 2. Greater utility.
 - 3. Interchangeability.
 - 4. Durability.
 - 5. Convenience.
 - 6. Comfort.
 - 7. Convertibility.
 - 8. Better quality.
 - 9. Better control.
 - 10. Noiseless.

- | | |
|-------------------|----------------------------|
| 11. Time saver. | 15. Duplication of parts. |
| 12. Noninjurious. | 16. No special skill. |
| 13. Sanitary. | 17. All around usefulness. |
| 14. No defects. | |

Inventions may also be graded as to their commercial or sales-pushing value. Make a survey of the number of probable users of the invention. For example, the possible sales of a \$5000 automobile in a city of thirty thousand people in which only a few men earn \$3000 per year or over — as in certain mill towns — is not directly comparable with the possible sales in a town of thirty thousand people of a purely residential character, where three thousand men may earn average salaries in excess of \$3000. But substitute overalls for the \$5000 automobiles, and the market possibilities are at once reversed — for think of the large number of factory workers. So always consider the territories in which the invention is offered for sale as well as the character thereof.

CHAPTER IV

GLEANNING THE TALKING POINTS OF INVENTIONS

EMPHASIZE the probable profit in explaining inventions. The easiest way to do this is to show that the invention excludes competition, or that the article has a variety of different uses. It pays to advertise, and in advertising one must dwell on the most effective talking points. These become apparent when the invention has been elaborated sufficiently to show just what it will do. Talking points which generate confidence and induce action are to be found sometimes in the article itself and sometimes in the processes of producing it. Some inventions require years of development before they are ready for marketing. Take the safety razor, for example. One of the most widely sold of safety razors is the outcome of seven years of hard work spent not simply in producing the original invention but in tempering thin steel, in producing a handle to hold the blade, and in devising machinery which would stamp blades out of a ribbon of steel. Few inventions are ever developed precisely as described in the patent.

An inventor cannot get the right perspective on his invention unless he considers his competitor's side of things as well as puts himself in the place of the ultimate consumer. An inventor about to begin

the manufacture of his own patented article must be prepared to meet all obstructive measures and arguments from his competitors laboring in the same field. He should not start without first having considered every reasonable objection from every point of view. Can they be met from the prospect's point of view? Minor and immaterial objections should be shown to be such and no time wasted on them.

The public does not swarm in the doors of inventors. They must seek it. Uphill work and tremendous effort are necessary to make an invention the talk of the town. Within a few days after the sinking of the *Titanic*, a writer commenting on the tragedy pointed out that the American people lack appreciation for great inventions. Had it not been for the wireless, the probability is that the fate of the *Titanic* would never have been known.

The inventor should be ready to furnish a written statement of the advantages claimed for his invention. If the party approached by the inventor is not thoroughly conversant with the scope of the invention and its commercial aspects, these should be explained.

In order to develop talking points, think on the following subjects: use, price, quality, color, size, quantity, shape, style, history of article, manufacture, equipment, ingredients, public opinion, efficiency, and distribution. The above features are suggested in a splendid book on salesmanship by N. O. Shively.

If the article is expensive, it must be shown that the article is better than the cheaper grade.

A painted article would cost more if painted by hand than if merely dipped.

Quantity affects price; if one manufactures in large quantities, the price will be low.

If the article is designed for many uses, this may justify a high price.

The ingredients of an article may be varied or few. The quality of ingredients will determine whether the price is high or low. Note the variety of the steel or iron material used in building a typewriter.

An article may be difficult to ship or handle, in which case the price will be naturally high.

Consider the various processes to which an article is subjected in manufacture and the cost of securing raw materials. High efficiency of an article may either increase or lessen the price. The invention may save time, effort, or energy. Expert mechanics may give the article quality and hence fit it for general use. The article which is faulty and ill conditioned because of poor materials and poor construction can never be in universal demand.

Public opinion may cause the price to rise. If an article is in great demand, the price will advance accordingly. If the demand is sluggish, the price is low.

The nearness of the market, the cost of transportation and the difficulties thereof, ease of storage, all tend to affect the price.

If an article has a particular size, the size may determine its practicability and how extensively it will be used. A large or a small article may be found more convenient, economical, and practicable.

The shape of an article may permit many uses or few. It may cause it to be inaccessible, impractical, inconvenient, or the reverse. The price of an article

may make it prohibitive for commercial use. It may be a luxury and be used by a few; it may be of such a nature that it can be used by many.

The ingredients may be of such a nature that the article can be used in all climates and by many or few people.

The use of an article will suggest many talking points. People are interested only in the use they are to make of an article which they consider purchasing. If the machine will do something a competitor's machine will not, feature that point. In selling office devices, from a pencil sharpener to a mimeograph, the salesman must show that the article will save time and energy and that it is worth more than its cost. Thus take the universally used fountain pen as an example. The following are some of the talking points:

The fountain pen can be used in almost any kind of business.

There is a pen to fit everybody's hand.

The fountain pen is a time saver and also an ink saver.

It does away with carrying a pen and a bottle of ink.

It does not take up much room in a pocket, purse, grip, or hand bag.

The safety fountain pens do not leak.

Better work can be done with the fountain pen and in less time.

It does not tire the hand as a straight pen will.

There is always a considerable number of such talking points. One must know which of these talking points are most convincing. In writing out the statement of advantages, be sure to use the trade

nomenclature so that those who talk the language of the trade may readily understand.

Do not overlook the cost and expense argument. It is the bone and marrow of the proposition. An invention enters the world's market in close competition with other devices of a similar nature. If it costs more to make, it will be heavily handicapped from the start. The inventor will talk against time in trying to sell it. If it costs less to make, it will have this additional advantage pulling in its favor from the start. An inventor must always realize that a manufacturer is slow to abandon an article which is giving fairly good satisfaction, where capital is looked up in special tools and patterns, advertising matter, and good-will. In the nature of things a patented article, or even a staple, proprietary article, has a fixed price and value. An Eastman Kodak is the same the world over; there is only one quality. That is not true of sugar, clothing, print goods, stationery, etc.

Do not ignore the gigantic pull and power of advertising behind many unpatented things. A new article, to succeed, must show at a glance that it is something better. It must have a sufficiently quick sale. If an invention is better than others, costs less to produce, and has more talking points, the dealers will be quick to buy it. Otherwise, possibly not. It is well to be associated with a manufacturer who advertises and who has a reputation that it has cost money to build up; one whose very name is a guaranty. But if, for some reasons, this cannot be done, sell the patent to the retailer. Do not approach the manufacturer at all. Much depends upon

what the invention is, and what merit it has. Remember, talk profit all the time. What would not appeal to the manufacturer as a profit may appeal to an enterprising retailer. Suppose the invention is a meritorious hairpin. The retailer could buy the patent, have the article made by contract, and eliminate the jobbers and a good part of the manufacturing profit, thus having the exclusive handling of the hairpin in his own city and at the same time licensing its use in other cities. In this way, after public demand is created and trade in the article is brisk, the retailer will find public patronage increasing in other articles he sells. The retailer should be located in a large city so that the inventor may be assured of a royalty on the invention from the start.

CHAPTER V

HOW PATENTS EXCLUDE; PRACTICAL EXAMPLES

A PATENT is made useful by a series of strong claims. The claims are the most important part of the specification of a patent and the most difficult feature of patent work. A claim is ordinarily that part of the patent which is least understood by an inventor. The popular idea of a patent claim is that it signifies some special or signal advantage which an inventor's device has over others. But this is a wrong conception. A patent claim is a unit of protection for an invention and defines in plain terms the amount of protection accorded to a new invention. The more claims that a patent possesses, the stronger will be the excluding power of this patent against infringers, as it is the office of any single claim to bring out a series of parts related together in point of coöperation, effect, function, and utility, or acting in a definite manner. Since some parts of a device may be infringed or sought to be used, and other parts not, it is necessary to protect each part separately.

The whole patent system hinges upon patent protection of a definite character. The protection is accorded by the courts and is measured by the Patent Office. A claim is that part of a specification which defines what the inventor regards as new over the

"prior art." Before any claim can be written and included in a patent, the condition of the particular art to which the claim relates must be ascertained in order to learn what others have done before. Once a decision is formed as to the breadth and scope of the invention, suitable language is employed to define this invention and the result is a claim. A successful claim writer must be nine tenths a mechanic and one tenth a lawyer. A successful claim writer must be a good scientist, mechanical expert, and a philosopher at the same time. A claim is also a unit of novelty, must contain no hidden meaning, and must be for a structure which will operate. A sufficient number of parts must be recited for this purpose, otherwise the claim will not protect so as to exclude others from supplying perhaps an obvious omission and thus making the real invention with impunity. Every element in a claim is material, and the courts passing on infringing devices will consider them all material. A claim is either broad or specific according to the nature of the invention and the terms embodied in the claim to particularize the protected features. But no claim can be so broad in language as to cover not only every variety of equivalent structure falling within its terms or scope, but other inventions as well, not similar in principle.

Many patents are issued with bad claims so that the protection accorded in them is devoid of significance. The result is that these patents cannot and will not exclude infringers and are fit for the wastepaper basket. The inventions may be excellent, but the patents obtained to protect them are worthless. To enable the reader to judge what kind of claims are

worthless, some examples will suffice to explain general principles of patent protection by means of patent claims. We will take the bicycle as an object lesson in analyzing claims, and for the moment we will assume that the bicycle is a brand-new device and never existed before.

A bicycle is a type of road vehicle or conveyance where power is applied by the feet of a rider to one of two sustaining wheels. The frame or balancing member of a bicycle consists of rods, two of which are in the form of uprights or forks arranged at the ends of the frame, there being a V-shaped brace connecting these uprights. Revolvably mounted in the fork ends of these uprights are wheels which are held in alignment and journaled upon axles. The front upright has its upper portion loosely arranged so as to turn or swivel in a suitable bearing provided by the frame, and as the front wheel is mounted in this fork, means is thus provided for turning or steering the front wheel. A sprocket gear is secured to the axle of the rear wheel, and another sprocket gear is attached to a shaft journaled in the lower portion of the V-shaped brace. A sprocket chain is trained upon both sprocket gears. Cranks are secured upon the last-named or front sprocket gear and are actuated by pedals. The rider is supported on the seat so that his legs straddle the frame and his feet may engage the pedals so as to set the chain in motion to propel the device. By means of the rider's hands engaging the handle bars to direct, guide, and steer the bicycle and his feet which rotate the sprockets and propel the device along, the bicycle is maintained under equilibrium and the frame suitably balanced, in motion.

It is proposed to write a patent claim on the bicycle as described above which should be as broad in scope as is possible and yet cover an operative structure. The first thing to consider is, What are the fewest number of parts which will make an operative structure in a bicycle? Having discovered these essential elements, the next thing to do is to combine them in a way which will bring out their proper relationship. These elements are to be combined in an orderly, systematic way in a logical sequence, regard being had to cause and effect. The mere addition or inclusion of a number of elements in a claim without placing those related, coöperating, or coacting together, results either in an impossible structure or else in an impracticable device. Note claim:

1. *A device of the character described comprising a frame, oppositely arranged wheels disposed in alignment in said frame, a seat on said frame, driving mechanism controlled by the feet of a rider, and means controlled by the hands of the rider for guiding said wheels.*

This is a good claim and will protect the bicycle invention because it excludes any one from making a vehicle running on two wheels arranged in a straight line connected by a frame having a seat thereon, and equipped with foot-controlled driving mechanism and and hand-controlled guiding or steering mechanism. It defines a bicycle in good set terms and nothing else, and states the fewest operative essential parts. It does not refer to any part of the bicycle specifically, and whenever the term "means" is used, it is broad enough to include any arrangement of parts or device capable of performing the function required. For example, the means for impelling said wheels (con-

trolled by the feet of a rider) might be pedals and a sprocket and chain drive, or may consist of intermeshing gears, or of depressible actuating means connected by a crank and pitman to the rear wheel, or any other device, either patented or not, which will operate, when placed on the frame and in engagement with either wheel, to rotate the latter.

2. In combination, wheels, a frame supported on said wheels, means for setting said wheels in motion, and means for enabling the rider to steer the wheels.

This claim is so broad that it covers and defines not only a bicycle but any vehicle. This makes the claim faulty, wide of the mark, and invalid as a bicycle claim, because the wheels are not limited to two wheels. An automobile with four wheels and a velocipede with three wheels would both come within the terms of this claim, because each includes means for setting the wheels in motion and means enabling the rider to steer the wheels. The limitation of Claim 1 — that the propelling means is foot-controlled and the steering means hand-controlled — is eliminated in Claim 2, and while it makes the claim broader, it either fails to describe or misdescribes a bicycle and is therefore worthless. It would not be allowed by the Patent Office, as it does not feature the device known as a bicycle, and that is what the claim is supposed to do in its application to the bicycle under consideration.

3. A bicycle composed of a balancing member having a seat, wheels for supporting said balancing member, motion-transmitting mechanism for said wheels, and means whereby said balancing member may be controlled by the hands of a driver.

This is a good, well-laid claim and is very broad in scope. It protects not only a bicycle but all fair mechanical equivalents thereof. It would cover a motor cycle as well as a bicycle, for in both cases a "balancing member" is included and suggests so many wheels only as may be arranged to permit the member to be balanced thereupon. Thus three wheels could be arranged in alignment, and as in this way a member or frame would still be balanced, it would be protected and covered by Claim 3, where Claim 1 or Claim 2 would fail to protect this possible structure. A motor cycle also has motion-transmitting mechanism for its wheels, and while in a bicycle the handle bars enable the rider to steer and maintain the equilibrium of the device or frame, in a motor cycle the stopping mechanism for the device may also be located upon the handle bars. So the term "controlling means" may be broad enough to cover any such mechanism, as it does not specify any kind of control.

4. *A device of the kind described, comprising a support, wheels mounted in said support, and means for enabling a driver to propel and guide the wheels.*

This claim is misleading and misdescriptive, as it does not correctly recite the proper mechanism which is actually found in a bicycle. It tends to encumber rather than to protect. It does not enable one to determine just what a bicycle is as distinguished from other conveyances. This claim is vague and incomplete, because the last clause refers to two wholly unrelated parts of the same device. Propelling the bicycle calls for one instrumentality, while steering it calls for another. Two pieces of mechanism should never be claimed as one piece, and should never be

included under the broad term of "means" if their functions are different. The functions of two pieces of mechanism are different when one part would perform its function just as well as if the other part were absent and vice versa, i.e., where the two parts do not coöperate to produce a *single function*. The mechanism for driving the wheels of the bicycle must be able to operate whether the device is complete with a steering mechanism or not. If one mechanism is defective, the other is not necessarily so. In other words, in a bicycle there is no single, unitary, or inseparable means for enabling the rider both to impel the machine as well as to steer it. One means is independent of the other and should be included separately in the claim. The clause should be rendered as follows: Means for enabling a driver to propel the wheels and means for enabling him to steer the wheels. The claim should also be amended to bring out the fact that the support is mounted on two wheels, as this is necessary to make it refer to a bicycle.

5. *In a device as described, the combination of two wheels, rods connecting said wheels, pedal-operated means arranged to rotate the wheels, and means whereby one wheel may be swiveled.*

This is a good claim and is more specific than either Claims 1 or 2, inasmuch as it recites pedals adapted to rotate the wheels, i.e., a particular kind of propelling mechanism or actuating means therefor, and also specifies that the guiding or steering is effected by swiveling one of the wheels relatively to the other wheel. Note that this claim does not state *how* the pedals are arranged to operate the motion-trans-

mitting mechanism, whether by means of cranks secured to a gear or not, or whether the pedals are mounted on any particular wheel or not. Of course a velocipede is also operated by means of pedals and also has one wheel which may be swiveled relatively to the others, and rods making up the frame. But this claim recites two wheels, and a velocipede has three wheels. It is easy to balance a three-sided vehicle, or a vehicle mounted on three wheels, two in back and one in front, and to allow the front wheel to swivel. But a new problem is involved in making two wheels do what it took three wheels to do before. Therefore this claim is definite, defines a bicycle, and would exclude others from making an arrangement covered by its terms.

6. *The combination with wheels, of a device for rotating said wheels, and means whereby one wheel may steer the other wheel.*

This claim is defective as being obscure, incomplete, and ambiguous. Every element in a claim should be recited positively and not inferentially; the last clause intimates that one wheel may steer the other wheel, yet the first clause does not specify the number of wheels. It would be correct to say, "the combination with two wheels," etc. This claim is misdescriptive of a bicycle, as there is nothing in this claim to distinguish a bicycle from, say, a toy train running on tracks. If, however, this claim mentioned "a frame supported on the wheels," mentioning two wheels positively, a bicycle would then be suggested even if the claim omits to mention the fact that one wheel is steered manually or by means of a person, for there is no reason for so limiting the claim

as thus simplified. To do so would be to restrict the range of equivalents the claim could cover. This is what makes word play so important in claims. Suppose a vehicle were propelled automatically on two grooved wheels running on circular tracks, of course one wheel in following the curvature of the track could be made to steer the other wheel. By avoiding the inclusion of unnecessary limitations in this claim it is broadened in scope so as to include this possible structure. By amending or revising this claim to mention the frame supported on two wheels, it will be seen that the device defined could not be confused with some part of a machine fixed on a table, etc. In other words, cured as suggested, this claim would be broader than any of the previous claims, as it would fence around a wide range of variations.

7. In combination, a frame including a V-shaped brace, handle bars on the frame, two wheels mounted in alignment within the frame, means for rotating said wheels, a post on said frame projecting above one of the wheels, and a seat secured to said post, said handle bars being swivelable.

This claim differs from the preceding claims in matter of protecting certain details of the framework of a bicycle set forth; to wit, a frame having a seat post projecting above one of the wheels and mounted on the bicycle frame. This supports the rider in proper position to enable his hands to engage the handle bars also mounted on this frame and so steady and properly balance the device. The claim is very bad, as it would not exclude others from making either the particular device covered by the terms of this claim or the device which the inventor evidently

intends to protect thereby. It would drag in, head and shoulders, many unnecessary parts. The V-shaped brace is an unnecessary feature in the claim and is therefore a needless limitation. It is like putting butter upon bacon. It does no good as a protecting feature, but does a positive harm and is oppressive. Suppose a different-shaped brace were substituted for the V-brace by an interested party; clearly he would not infringe this claim even if otherwise he employed all the other really essential parts. Again, why mention that the handle bars swivel without showing what they swivel, so far as the protective parts of this claim are concerned? A party may make the device without the steering handle bars and assert that as the claim fails to specify any connection between these swivelable bars and the front wheel, the inventor did not intend to cover a swivelable front wheel. The party would therefore make the front wheel turn and would not infringe this claim. In the event he does not make either the front wheel or the handle bars thereon turn, but uses all the remaining parts mentioned in Claim 7 above, he would still not infringe. His just defense would be that making the handle bars swivel on the frame is either an inessential limitation so far as defining a complete device is concerned, or it makes the entire claim cover an impracticable if not an inoperative device, because if the handle bars could easily swivel without the front wheel, it would tend to render the entire frame unsteady and in fact would prevent the frame being balanced. In claim writing as in argument, "least said is soonest mended."

CHAPTER VI

DEVELOPING INVENTIONS

INVENTIONS, as a general rule, have to be developed. There is a clear necessity for this in order to demonstrate whether or not the invention will work, and, if it does, its degree of fitness for the work intended. This development is a necessity alike to the inventor and to the capitalist seeking to acquire an interest in inventions under advantageous conditions.

Inventors and capitalists should be more ready to coöperate. The capitalist should join with and encourage the inventor. Let him take an interest by assignment and pay the expenses of manufacture. Brains and knowledge are valuable and necessary and are the primary causes of invention, but the inventor cannot obtain protection and try his invention practically without money. It is a heavy pull upon the purse. The capitalist should match the inventor's brain with cash and join hands with him, not merely as a trial but with a determination to succeed in reducing the device to demonstration. If the investor waits until the inventor obtains a patent and shows the value of his invention, he may find that the price for an interest in the patent is more than he cares to pay. Successful inventors have almost universally had the assistance of capitalists, not only after the inventor acquired fame, but at

the time the embryo invention was in a state of uncertainty.

A model is best calculated to win friends who approve and who will help financially. The only inventions that count are those that emanate from men who understand the business. As concerns inventions, an inventor with a practical demonstrative model and a manufacturer with the wisdom to back him with money and faith both offer the best possible teamwork for success. There are, of course, some exceptions to making models, as some inventions cannot easily be experimented upon. Such, for example, would be an improvement on a suspension bridge, a new type of locomotive boiler, or a novel method of building construction; but as a rule, always make a model for experimental purposes.

This model should be of a working size and dressed up neatly, should show all the features of the invention, should be strong and durable, and should operate satisfactorily for all purposes of practical demonstration. It should not be of an expensive kind, because it may be necessary to add more parts or to entirely change the fundamental idea of the invention. Let it remain on the "anvil" long enough to be put in good trim. The model-maker should have all the facilities at hand for constructing a neat article, and when it is done, it should perform its allotted function. Try it. Try it completely and under *service* conditions. It will be time well spent. Consider carefully how it can *best* be made. After an idea has been perfected, an expert mechanic should be consulted to find out how the model should be constructed. Should it be cast or forged or stamped? Can it be made in

a shop or does it require hand work? Is it difficult or expensive to assemble? Can it be pieced together when in need of repair?

A model should not depart too far from the specifications of the patent. First send the model to prospects, then the patent papers, but only after interest in the model has been displayed. Always examine whether the patent will protect the construction as shown by the model. An inventor should determine whether a patent corresponds to the model as constructed.

Inventors who have rushed their patent applications, sometimes depart from their patent in making their final model to such an extent that their ultimate construction is outside the claims. There is a case in which a manufacturer bought a patent based on the opinion of his attorney to whom he had neglected to submit his model. This later involved him in litigation owing to this condition developing. There is no doubt that numerous patents are carefully reposing in manufacturers' safes under similar circumstances.

Most patented inventions have to go through a regular process of development. It is so with small inventions; it is so with large or important inventions. The Edison lamp patent, for example, did not show a structure which, as described, was of commercial value by itself, but it soon became of enormous value to the public because other inventions were added to it. The first Bell telephone could barely convey speech. What difference did it make? The idea was there, and inside of eighteen months or two years other improvements were added and we had first-class telephones. This is often the way in which an inven-

tion becomes fixed in form and substance. Thereupon it is ready to form the basis of a manufacturing industry and to insure the greatest measure of success to the inventor. The patent itself does not create the industry, but the patented thing does. Why does an inventor expect a busy manufacturer to be interested on the receipt of a copy of a patent describing his invention? Can he reasonably be supposed to take the time and sit up nights in order to analyze a set of patent claims and study out the operation of the invention from a drawing without a model? The manufacturer prefers to see the thing itself. He wants a clear stage before he parts with ready money.

Assuming that everything is in readiness for making a model, what kind of model should be made? One that will stand the inventor or his backer the least expense. Models of small or simple mechanisms, or perhaps of parts of these mechanisms, are frequently made at the expense of a few dollars. In many cases the inventor himself is able to construct the working model, thus avoiding most of the expense of experimental work. Occasionally a device is so simple and obvious as to require no work of this kind. As a general rule experimental work and model making should be on the smallest scale that will satisfactorily demonstrate the mechanism. It is almost inevitable that the new device will require many changes from the first design and will show many possibilities of improvement. In model work the usual charge made is for time and material. One should choose smaller shops in preference to larger ones in order to make sure that the work will receive the individual attention it deserves. After a working and commercially

successful model has been made, the next thing to do, upon finding out the good talking points, is to write a letter to the manufacturer stating the advantages of one's invention and informing him that, if he is interested, a working model will be submitted for examination. Create commercial interest before attempting to submit the proof of the legal strength of the invention, if one must take up the negotiation by correspondence. If one cannot make a model, or have it made, it is better not to bother with inventions, in connection with which making a model is the last step which wins.

CHAPTER VII

SUCCESS IN INVENTING

WHAT are the things necessary to make an inventor successful in pushing his invention?

What should the inventor do to overcome certain drawbacks? Every day these questions loom up. The answer will be found by gauging the work of successful inventors whose number is legion. It is estimated that patentees of the United States have paid Uncle Sam about \$7,000,000 in excess of the expenses of the Patent Office. This is significant. The amount earned by inventors themselves defies belief. How much of this are you getting?

The question is, What is the earning capacity of the reader's brain? The average man uses only twenty-five per cent of his brain power. If one wants to succeed and has courage and persistence, nothing can hinder him. If a man thinks optimistic thoughts, nothing in the world can keep him from being an optimist. Success always means a fight. "I can't" is not in the business vocabulary. The only difference between a genius and a failure is that a genius knows no such word as "quit." The genius always takes the bit between the teeth. One must be a bigger man and a better man today than those who succeeded a generation ago. The greatest and best things in life do not come by chance or in a

twinkling. These things are always the result of some effort based on a definite plan.

In these arduous times people must be trained in order to succeed amidst the concourse of brains. The work of a new era is now before us. It has been well said that the great world war was a war of the scientist and engineer. It was a race of skill between the inventors of warring nations. And success can be obtained only where the intellectual faculties are in a receptive condition.

Suggestion never can accomplish that which is not backed up by real ability. Will power is the power eternally to hold on to the right in the face of opposing wrong, to court success in the face of opposing obstacles. It is the power of eliminating those actions and desires which are not compatible with future development and nourishing those which are. That gives real power to the will.

In anything that one does, the smile and pleasing countenance carry great weight. Concentration is the ability to hold the mind on one object to the exclusion of all others. If one desires to influence others, one must have confidence in one's power to do so. The extent of one's personality will be determined by the strength of one's will and the power of concentration. As long as one will continue to drink in knowledge there can be no blighted hope.

Let no one be discouraged with his present condition. Let his thoughts be hopeful. People, business firms, are not pitted against the inventor, so he need not worry about this. No matter how old one is, things are ripe today for success. In reality, age has nothing whatever to do with effort or ability.

Since, in 1918, the draft age was raised, there is a movement afloat to boost the man advanced in years as an instrument in business. Many writers have taken up the cudgel in behalf of the superannuated to show that they are, by reason of their experience, able to accomplish good work in spite of their years, and much better work than some young people. Remember that man's greatest work must be done in later life. It is then that he can profit by the experiences of his youth; but if he lacks the energy, force, and vitality that would obtain results, his later life is sure to be a failure. There never was a better time for men who actually know, to succeed.

Technical magazines are helping. For example, the *Lighting Journal* publishes complete monthly lists of the latest inventions relating to lighting. Interested firms are going after inventors who have things they need. A rich concern, interested in a patented invention, is not going to hesitate when it comes to buying inventions it needs. If it knows of a dozen men who have been working for years on a particular invention, — who are working at it from different viewpoints and going to arrive at the same results by different routes, — it will buy all the inventions and not take a chance to find out which is the most valuable. Such pieces of good fortune are not rare.

Good management of a patented article makes the person a fitter instrument for success than the thing. Mr. Edison succeeded in making his invention a success, because at the last moment there came capital enough to him and talent enough to put it forward. In ninety-nine cases out of a hundred it is necessary for an inventor to find some assistance outside of his

own capital. If a man is trained, he will have no difficulty in doing things for himself, but if not, he certainly can succeed by finding the right man. Every man must be prepared for his work; it takes years of training to do so, but when he is able to use the next man's skill, he does not need all this training. Mr. Carnegie frankly insisted that the men who worked under him were smarter than he; but his keen selection of men to do the work he could not do as well himself proved a casting weight and had a good deal to do with his uplifting. It requires more grit, more talent, more training, to sell goods today than it did ten years ago. A good sale brings mutual profits. A patented article appeals to the modern business man because of its price-fixing tendency. One half of those who sell patented goods today, are maintaining price and find it one of the best things for their industries that could possibly happen.

When a patented article is taken up for sale by an enterprising business firm, the primary objective is to get a secure foothold on the market so as to shut out not only unpatented articles but patented articles of rival firms as well. Take the case of the United Shoe Machinery Company. The reason why this big concern has developed its large business is that it makes the best machinery and all the machinery a manufacturer wants. He does not have to go to this town or that town and this man or that man to get a complete equipment. In each shoe town or shoe center the company keeps a corps of skilled men ready instantly to repair or adjust any machines which get out of order so that the shoe manufacturer has to deal with only one concern. If any machine gets

out of order, the company sends a man to repair and adjust it. It pays them to do it.

There is thus nothing magical or impossible about inventions. Success means optimism and opportunity and above all preparedness. Take the statement of one of the very best authorities, Thomas Ewing, who until recently was Commissioner of the United States Patent Office. He says: "With the exception of but one plant, which has been unfortunate, every man with whom I have been associated to any considerable extent in the last twenty years has done well with his invention. He has improved his position; he has even made money by the sale of his product or he has gotten associations that have helped him, and he has been enabled to develop his patent lines and has gotten ahead faster and better than he would without them." Another important authority, Justice Brandeis of the United States Supreme Court, who was formerly counsel for the United Shoe Machinery Company, stated that three things are necessary to prosecute an invention successfully: First, you need a good invention; secondly, you need ample capital; thirdly, you need good management. How to obtain all this is what it is proposed to take up in subsequent chapters.

CHAPTER VIII

THE DEMAND FOR INVENTIONS

AS stated above, the amount of money to be made from inventions depends upon marketing conditions and especially upon the demand for inventions. With so many examples furnished by the experience of enterprising firms, there is no room today for wrong conceptions about marketing problems. Marketing means a lot of money and the influence of men well up in trade and business. In the natural order of things inventors are usually poor business men.

Skill in handling patents counts for more than luck. Analyzed carefully, successful inventions have simply been marketed right. The little rubber stopper with the wire attached to it, which is now used on every beer bottle, is a good example of fine business management in the handling of an apparently trifling invention. Public demand for any one's invention practically regulates its success from a commercial standpoint. If there is no public demand for it, there can be no substantial profit or income from it, however hard people may crack their brains.

The first questions to be considered in demand-creating are:

1. Is there a demand for an invention or its output?
2. Will the invention do the work?

3. Will it do it better or cheaper than other existing devices?

4. Can it be efficiently protected?

Some inventions that do not perform the work required of them when a patent is strictly followed, can be made to work.

Then there are questions as to how to market inventions. These are:

1. Shall we sell direct to the consumer by our salesmen?

2. Shall we sell direct to the retailer?

3. Shall we sell through selling agencies?

4. Shall we sell by mail direct to the consumer?

It is again necessary to urge that the process of putting an article on the market is not as simple as may be imagined. It is necessary to create a public demand before the invention can be sold on any large scale, and it is necessary to follow up the demand by supplying the article, otherwise the fruit of the effort to get it will be lost. The manner of procedure will depend upon the nature of the invention. After figuring out carefully the net cost of manufacture and fixing a reasonable wholesale price which leaves a margin of profit, the manufacturer must secure trial orders from various concerns. The inventor must create the market for his product. He must not wait for the market to be created for him; otherwise he will get nowhere.

A very large proportion of the really useful patents is born of the necessity of manufacturers. They do not sit down and say, "Now let us invent something"; but forced by the exigencies of business competition, which bring matters to a crisis, they find themselves,

in order to secure an advantage in their struggle for the public's orders, compelled to devise means to make their machines or products better than those of their rivals. The bigger the enterprise, the more foresight must be displayed in forestalling the market. The biggest corporations today have their study departments, their closed laboratories, where a multitude of inventors are studying fresh problems to supply the future needs of men. They say this to their own corps of inventors: "Don't wait for the future to make itself; mold it ahead of time. Don't wait for the demand; have the product that will be wanted, ready in advance." Incidentally, it explains the attitude of mind of these big men, who are the fountain heads of business enterprise.

The following is a good formula for determining the market for the product of a manufacturer: The number of possible customers times the average sales to average dealers, divided by the number of manufacturers of equal rank, equals the total normal quota of sales of a particular city for the normal amount and intelligence of sales effort.

There are two aspects of the question: (1) knowledge of the formula and (2) estimate of the factors which will supply the data and solve the formula. To take a concrete problem. Suppose it is desired to find the number of probable sales of gloves that manufacturers may expect to make in a given city. The inventor will first have to *find* out the number of people in the city who are likely to be purchasers of gloves. This depends (1) on the nature of the article and (2) on various conditions obtaining in the particular city.

1. Nature of the Article.

- A. Whether used by all classes of people.
- B. Whether used by a certain class.
- C. How often used.
- D. How frequently purchased — repeat orders.
- E. Whether it is a necessity or a luxury.
- F. Whether there is a special season of use.

Gloves as a rule are not used by all classes of people (*A*), but by well-dressed people (*B*) who use them more or less daily during business hours or when making social calls, in the company of women, in the evenings, on Sundays, and on special occasions (*C*). The average user will make one pair of gloves last a season, although others will have several pairs of gloves for various or interchangeable use (*D*). Gloves will be used as an accompaniment of other clothing and so as to harmonize therewith, sometimes as a matter of convenience, sometimes as a matter of actual necessity (*E*). They are used mostly in the cool season, infrequently in summer (*F*).

2. Conditions Affecting the Particular City.

- A. Population.
- B. Industrial or factory center.
- C. Social center.
- D. Condition of the working classes.
- E. Waterways, seaport, etc.
- F. Cost and standards of living.
- G. Number of visitors, transients, etc.
- H. Intellectual center.
- I. Number of office workers.
- J. Number of professional people.
- K. Tone of residential districts.
- L. Transportation facilities.

M. Store service.

N. Prosperity of merchants.

O. Fixed salary class.

If the city is an industrial center and factories are plentiful, making diversified articles (*B*), it will reflect the prosperity of the different classes. Wages will be fairly high and the condition of the working class satisfactory or at least normal (*D*). The workers will have money to spend, and merchants should benefit thereby (*N*), as should the professional men (*J*). Necessities would be purchased first, — for the house, etc., — then things for personal convenience. This item would cover clothing, gloves included. Industrial prosperity for the city is one of the factors which will influence social activities. Thus if the city is a social center (*C*), it would react upon the standard of living of a large class of people residing in the residential districts (*K*) whose needs would necessarily increase and call for many ramifications in store service (*M*). The industrial prosperity would determine the fortunes of a large class of desk men or office workers who also have modest social activities, especially the younger element (*I*), and it would make in favor of the security of fixed salaries (*O*).

If the city has good waterways and is a seaport, with or without good harbors and shipping facilities, this prosperity will be reflected by the city. The number of visitors arriving and leaving the city will be influenced (*G*). If the city is an intellectual center (*H*), this will also influence the number of visitors (*G*), who are usually well-dressed. This condition will also react on the merchants and call for better store service and facilities, better hotel service, etc.

It will also affect the cost of living, may increase the number of office workers, professional people, etc., and add to the city's wealth. Transportation facilities in general will influence the price of commodities, the number and patronage of the stores, the influence of the moneyed classes, the tone of the residential district, the number and efficiency of mechanics, middlemen, working men, etc. By analyzing possible market factors in this way, the complicated fabric of a city's industrial, social, and intellectual organization is unraveled.

Coming back to gloves and considering possibilities and gauging susceptibilities as outlined above, it will be concluded that well-dressed people may be found among office workers, business men and merchants, and most frequently among professional men, among people of both sexes, prominent socially, etc. Professional people, business men, ladies, etc., will purchase more gloves than will office workers or workingmen, as they have more opportunities to use them. After sizing up correctly as nearly as possible the advantages any particular city of a determined population possesses in point of trade, industrial, and intellectual prestige, the next thing to do is estimating the possible total number of purchasers out of the total population. For this purpose use may be made of statistics of the volume of trade, freight, transportation conditions, ship movements, government reports, trade reports, trade papers, and house organs, reports of commercial agencies, traveling salesmen's reports, market fluctuations, newspaper advertisements, etc. Let us say that a city of 300,000 inhabitants, having more than a fair pro-

portion of workingmen and a large number of factories, will furnish a reputed 16,000 (more or less) customers for gloves in a determined period of time, varying from six months to a year.

It is now necessary to know how many manufacturers are to supply the needs of these customers in the particular city under consideration. It must be considered that 16,000 represents only the number of persons who will purchase gloves and not the total number of individual sales which will be made by all the retail stores selling gloves in that particular city. First, it must be remembered that the approximate total number of manufacturers making gloves alone or as a side line is to be found out, and that only a certain percentage of these will be doing business in the particular city. In the absence of definite information, these active ones will be grouped into members having equal rank. The following items will tend to indicate what factors will determine the rank of any particular manufacturer:

What Determines Rank.

- A. The number of traveling salesmen employed.
- B. Amount of capital invested in the enterprise.
- C. The activity of the sales department.
- D. The activity of coördinate advertising department.
- E. Appropriation to push sales.
- F. Efficiency of packing department.
- G. Nearness to centers of trade and transportation facilities.
- H. Regulation of the supply of the product.
- I. Cheapening factors of production.
- J. Maintaining standard of excellence of the article.

- K. Labor market conditions.
- L. Conservative policy of management.
- M. Efficiency of office administration.
- N. Absence of national or local regulations which hamper effort.
- O. Receptiveness of new ideas, plans, and policies.
- P. Corporate connections.
- Q. Interests in subsidiary companies and firms, making items essential to product.
- R. Selling *vs.* production expenses.
- S. Constancy of expected profits.

As a rule the number of manufacturers of equal rank with national sales organizations doing business in any particular city is more or less known, but the number of others (less than the total) may be uncertain. On the other hand, the average sales of gloves to average dealers, for the period under consideration, may be determined with comparative certainty, without knowing the total number of stores to be supplied, so that the latter will be an unknown quantity. An investigation of the average sales to average dealers will reveal, let us say, that 150 pairs of gloves are sold to the average dealer over and above existing stocks, for the period considered. There may be anywhere from 200 to 300 stores selling wearing apparel and articles, but how many actually handle gloves steadily is not known. We now have 16,000 possible customers and, let us say, 40 manufacturers making gloves. By the formula we will express the equation thus: $40 : 16,000 = 150 : ?$ In other words, the number of possible customers, times the average sales to average dealers, divided by the number of probable manufacturers, gives the total normal quota of sales

for the city. This is assuming, however, that 40 manufacturers are actually selling gloves in this city. Then 150 gloves, times 16,000 (by the formula), divided by 40, makes 60,000 pairs of gloves, which represents the total amount sold in this city for the particular period. This may not be exact, but it is a safe estimate. If 300 dealers sold equal numbers of gloves, of course each dealer would sell 200 pairs (60,000 — 300). Now let us suppose that two large advertising and enterprising glove manufacturers practically hold the field to themselves and are of equal rank, say the firms of Meyer and Adler. This is definite. On investigation it appears that they control 75 per cent of the total amount of sales, the balance going to other competitors of varying ranks. Seventy-five per cent of 60,000 would give 45,000 pairs of gloves or 22,500 pairs of gloves to each of these competitors of equal rank. By checking up on incomplete data it is possible to obtain a satisfactory basis of computation of volume of sales of a manufacturer's product in accordance with the laws of probabilities stated by the formula. The following factors, in one way or another, have to determine the total normal quota of sales in any city.

Total Normal Quota of Sales.

- A. Number of stores selling the article at retail.
- B. Number of sizes, styles, and shapes of article.
- C. Number of special brands, which sell well.
- D. Amount of stock on hand.
- E. Number of repeat orders.
- F. Quantity of gloves produced at one time.
- G. Number of exchanges.
- H. Jobbers' supplies.

- I.* Special cut-price sales.
- J.* Movement of trade in vicinity.
- K.* Location of stores.
- L.* Amount of space for goods.
- M.* Character of window display.
- N.* Special occasion sales.
- O.* Amount of advertising.
- P.* Special discount if purchasing.
- Q.* Number and influence of salesmen.
- R.* Movement of other stocks.
- S.* Delivery facilities.
- T.* Credit department and family accounts.
- U.* Amount of credit in banks.
- V.* Volume of general business.
- W.* New or side line.
- X.* Profit or loss on periodic sales.
- Y.* Promptness in replenishing depleted stocks.

In its most specific aspect the question of demand for any given invention concerns the interest of the consumer, dealer, manufacturer, and inventor in the order named. The inventor comes last. It matters not a straw what the popular belief may be. If the consumer will not buy, the dealer, whether retailer or wholesaler, will not buy, and if they do not buy, the manufacturer will not make the patented article, and the inventor will derive no advantage therefrom.

A brainy producer of a good article believes rightly that the ultimate result of his efforts is the opinion the consumer, not the dealer, places on his goods. The consumer demands that certain attributes, which are deemed essential by him, be included in all products, and the manufacturer who refuses to fulfill the demand under these conditions, even though

he furnishes what he deems to be an improvement, without first determining how his product will be received, is taking a chance with fate. The public are not fools, notwithstanding Barnum's well-known remark; they are pretty smart. If a man wants to sell goods to the public, he will find out they know a great deal about them. The hardware people, the drug concerns, and other business firms, all have their meetings. The price-cutting dealer begins his work the moment the consumers have "cut the ice" and boosted the patented article so that the dealer derives a constant patronage and reputation for the article. The price-cutter always selects the article which has a reputation at a certain price. If the article had not been universally sold at the certain price and were not reputed to be worth the price, it would not be worth his while to cut it. The article could never become a drug on the market.

The dealers will insist upon a steady source of supply of a patented article upon which the consumer has bestowed his patronage. They will not take it up to sell unless they are assured of a reasonable certainty of supply, for to do so would not only occasion expense in suddenly changing over from their former system of business, but would also subject them to disastrous losses in case they create a new demand with their customers which they subsequently find it impossible to fill. To create a necessity for an article is a big task. With some inventions, like typewriters and automobiles, it takes years, large sums of money and considerable pushing, before they can be considered staple articles on the market. Then again, a large number of unforeseen experiments must be made

after a device is once launched — changes and modifications are necessary — and these cost money. One must take this in consideration and provide for it. The consequences of ignorance in omitting any detail may mean a failure of the entire undertaking. An invention does not always succeed in proportion to its merit; it may fail because of poor management.

The dealers realize that they are the channels of distribution and expect a reasonable profit from manufacturers. This is the ground for attempts at price fixing on the part of the manufacturer. The United States Supreme Court, the highest tribunal in the land, has condemned almost all instances of price maintenance, whether accomplished by contract or licenses under patents or copyrights. The courts at present regard unrestrained competition as a business necessity. Only comparatively recently have people thought otherwise. The courts have repeatedly declared it unlawful for trade associates to publish lists containing the names of aggressive price-cutters. The direct contract plan has also been discountenanced. By virtue of this the jobber agreed, in consideration of being supplied with the producer's goods, to sell only at certain prices and only to such retail dealers as were designated by the producer, who required the retailers who made these contracts to maintain a standard retail price. So there is nothing to hope for in the way of protection by direct sale contract.

If legal enforcement of price-maintained contracts is desired instead of the more effective way, which consists in educating the consumer to demand articles of known quantity and fixed price, it should be by way of straight agency or consignment of goods for

sale where the title to the goods still remains with the seller or consignor. A direct sale is tabooed. It is encouraging to note that in New Jersey a statute has been passed which is broad enough to forbid price cutting. It is doing a great deal of good. Let us hope that other jurisdictions will follow suit.

The demand being good and the dealer realizing the demand, the manufacturer is kept busy producing the article in quantities large enough to meet the demand. The manufacturer's problem is to gauge the public demand in the first place so as to make the article right. Competition will hit the manufacturer of a patented article harder than it will the dealer who, finding no demand, ceases to order, while the manufacturer may be well stocked with patented goods he cannot sell. Competition is always present and is a good thing in trade. It helps to produce a good article. True competition exists where one manufacturer is striving against another manufacturer to put the best article out for the least money; for if one dealer has a good article, he compels all other dealers to put out a first-class article of the same kind in order to meet competition. If they don't, they cannot sell the goods he does.

The manufacturer properly considers that inventor ignorant who knows nothing about market conditions. When an invention is offered by an inventor belonging to this category, the manufacturer will display no interest. Among manufacturers who seem likely prospects for an inventor, are some who try to take up much of his time without meaning to do business. With them he can accomplish nothing. He must find a way to avoid these and devote more

time to better prospects. But the experience a manufacturer has had, makes him a good judge of the salability of an invention. The maker of articles also knows what position he stands in when it comes to creating a source of profit for dealers and distributors, and he is on the lookout for patented articles that will sell well. Industrial competition is a form of war.

The inventor will now understand that he is in a position to demand adequate compensation for any patented article which the manufacturer will begin to make because of the demand existing therefor on the part of the consumer and of the distributor. He should recognize that he, the inventor, is the cause of it all. If there is likely to be a large and steady demand, once the manufacturer and inventor have ascertained this fact and the inventor has several propositions up his sleeve for disposing of his invention, a small, steady royalty would be the best mode of compensation.

If the inventor has *more than one* opportunity of placing an invention, he should give special consideration to the subject before deciding which proposition he will accept. He should bear in mind that sometimes the largest royalty offered may not be to his ultimate good. Consideration of the question from an investment standpoint will bring out the principle.

If the inventor considered investing his savings, he would place them where he would be sure of a continued payment of interest, even though the dividend were small, rather than in some investment which offered larger returns with a doubt attached as to their continuing at the same rate. A small royalty offered by a large and strong concern is safer

than a larger one based on hopes and promises of a party or firm that is not on a sound business basis. Competition and the possible volume of business have an important bearing on royalty. Close competition reduces the possibility of granting large royalties. A large volume of business works in the same direction. On the other hand, restricted sales at large profits should operate to the advantage of the inventor. The amount of capital necessary to produce and market an invention also has its influence. The greater the investment, the greater the risk of the manufacturer. The inventor is expected to bear a portion of this risk and burden expressed in reduced royalties.

The inventor must see to it that the patented article is always kept up to its standard of excellence, considered from the standpoint of the buyer's expectations. The manufacturer must produce the article patented in a condition acceptable to the ultimate consumer. More than one article has met the test of acceptability only to fail as a money-maker when subjected to the test of creating net profits. In such event the public will not have the opportunity of purchasing a product, however well it may meet the demand, unless there is a sufficient margin of profit between the *true cost* and the *selling price*. That is the only way to prevent the patented article already on the market from being crowded out by better articles. Sometimes it is a good policy for an inventor to make improvements in his invention after he is working his first patent. This will be necessary in order to keep out others from making these same improvements and so supplant the inventor in the good graces of the buying public.

There are some places where inventors are so numerous that manufacturing industries prevail locally. The little state of Connecticut, for instance, takes out more patents than all the southern states together. Therefore always consider the trade zone. Many businesses find it impractical to attempt to win trade outside of certain zones and districts. For example, a manufacturer of stoves has little if any market for his product in California. Consider also trade days. There is not a town of one thousand inhabitants in the country where they do not have specific trade days, and on those days the dealers will sell many articles for cost in order to stimulate sales on other articles. These and other conditions make in favor of sales and demand-boosting for an article of merit.

CHAPTER IX

THE MARKET FOR INVENTIONS

CREATING a demand has to do particularly with the selling end of the patented article. Creating a market, again, has to do with the feature of mechanical developing as well as selling this article. This is a practical difference. It will be found that the term "market" presupposes the existence of many mixed factors. These must all be considered separately. The particular and fundamental concern in demand creation is consumption, while the leading feature in market controlling is cost. When a manufacturer of an article first puts his goods out as an experiment, he does not know whether or not he is going to make money. He may spend fifty thousand dollars or he may spend five hundred thousand dollars in supplying these articles and still make no money. This may be due to the fact that the article is not good enough for the public. In other words, the producer may go up like a rocket and come down like a stick.

Different factories have a different cost for one and the same article, and the market they secure is consequently affected. The important item of overhead factory expense shuts out all other factors in the estimation of cost and the fixing of price. As was aptly remarked by Thompson in his able work on patents, and in an eminent article on factory

conditions affecting patent conditions, "a study of the mechanical methods utilized by a competitor in his manufacturing, as indicated by his product, is more important than studying his selling methods. . . ." It is also necessary to make a list of the comparative times necessary to assemble the parts of the new article. Owing to the constantly increasing cost of manufacture, this item is very important. "Remember that a deviation in order to meet a changed selling policy of a competitor is a mere detail, *whereas a change in construction* to come within a lower cost, discovered inherent in the competitive goods, after a product is placed on the market, is often prohibitive, owing to the expense involved in making changes."

One manufacturer found no profits in running his business where his cost of selling goods, which were new to the public and had to be extensively pushed, was fifteen per cent. While the creation of a really meritorious invention involves much ingenuity on the part of the inventor, the successful vending of that invention often involves ingenuity of even a higher degree. The personnel necessary to make any invention successful includes not only the inventor but the jobber and dealer in the world's market as well. Between them it is a triangular deal. The jobbers and dealers are the salesmen of the inventor; they are part of the mechanism the inventor must use to introduce the goods, educate the public, and create a demand. These jobbers and dealers trade in goods the great majority of which are not patented. They are free goods, and the public has been educated as to their value. The demand for them is large and the profits are not great, but as a rule suffi-

cient. Competition has been fought to a finish; all know what it means to cut prices. The maker knows that if he sells to several dealers in one place and one cuts the price almost to cost, the other dealers will "block the line." Profit now is so small as to become a mathematical point. Then the public always expects to buy at this ridiculously low price. As a result the manufacturer will no longer sell to this cut-rate making dealer, and the other dealers won't buy. As the manufacturer cannot afford to sell at the cut-rate price, he gets no more sales. Hence the better policy is to put a moderate profit on each article, and by large sales develop returns. In this way a producer can effectively husband his resources.

Whenever we think of the market, we think in terms of competition. It must always be considered. It is what stimulates invention. As a result of this competition a superior article is evolved and placed on the market. A manufacturer must make the most up-to-date article that he can for fear that his competitor will discover something that is equally good or better that does not come under his patent. Competition is the coping stone of business prosperity.

The proper time for the inventor to think of the market is not after he has obtained the patent but right from the very beginning when he applies for a patent. The matter must be resolved beforehand. Before filing an application, it is well to have a commercial investigation made to discover all products of similar nature which have been made in the past, and are being made at the time of the invention.

This may enable one to test one's construction after making the comparison. In finding the market, there is an element of psychology present as to how the patentee is going to reach the kind of people that will buy his article, how he can approach them, how he can get them to pay a proper price. If he does not succeed, the invention will be stillborn, and he will have nothing to fall back on.

Above everything else comes the cost of introducing an article into the market. Things are easy after a market has been obtained. The question is, How much effort, time, and money will it cost to secure this market?

This is a matter which cannot be determined beforehand. The cost of starting works, if they are necessary, or of fitting up machinery for manufacturing, or of altering such already fitted and similar charges incidental to production must be estimated. Next the cost of diffusion of knowledge of the invention or production to the ultimate buyers or consumers, officers, travelers' expenses, advertising, and salaries of officials enter into consideration, these being all the necessary expenses of manufacture which must be borne by the selling price of the product. They represent money going out, whether the inventor engages in the business personally or seeks others to do so under license from him. On the question of price it is necessary to figure first the cost of the commodity. After taking that into consideration, one must figure the reasonable profit that the retailer should make and then figure one's prices from that end and figure them as low as one possibly can so as to keep one's head above water.

The fluctuation of wholesale and retail prices in the market is a matter which cannot be foreseen. It will serve as a guide to mention that

5¢ articles, retail, cost 35 to 40¢ per dozen wholesale.

10¢ articles, retail, cost 60 to 90¢ per dozen wholesale.

25¢ articles, retail, cost \$1.75 to \$2.25 per dozen wholesale.

50¢ articles, retail, cost \$3.50 to \$4.50 per dozen wholesale.

\$1.00 articles, retail, cost \$7.50 to \$9.00 per dozen wholesale.

The gross prices are approximately as follows:

On a 5¢ article, \$4.40 to \$4.80 per gross.

On a 10¢ article, 7.20 to 9.80 per gross.

On a 25¢ article, 21.00 to 27.00 per gross.

On a 50¢ article, 42.00 to 54.00 per gross.

On a \$1.00 article, 90.00 to 108.00 per gross.

It is usually customary to give a discount of from five to ten per cent if ordered in gross lots. Terms of settlement show considerable variation in different lines and range anywhere from one to eight per cent for cash in ten days with extension of credit from thirty days net to ninety days "extra dating."

The mere invention of merchandise is ordinarily almost a minor consideration when put up against the selling and marketing of merchandise. There are thousands of inventions in this country which are very valuable indeed, but which are never commercial possibilities because of the selling problems involved. We have seen that it depends virtually upon the consumer to create a demand for a patented article; in fixing the price at which the article must sell, regard must be had to the price it is fair for the

consumer to pay. It is easier to induce the consumer to pay a higher price than the dealer, and once the consumer desires an article, the dealer will be compelled to stock it.

If an invention actually possesses superior merit, there is no necessity for figuring excess profits. A good run of purchases is assured, and things take a favorable turn. Some manufacturers of meritorious articles "cash in" on the market by taking advantage of the steady sale of their article. Daniel Kops, maker of the celebrated "Nemo" corsets and the inventor of many patented improvements in the corsets for which his concern is famous, stated that he did not charge the public an extra cent for his inventions. His cost calculations consider only materials, labor, and overhead charges. The advantage of holding the market by a superior grade of corset accounts for this.

There are not over twelve thousand retail stores of any importance in this country. Many things invented are of a nature demanding an outlet through the stores of the country in order to be commercially successful and in order that they may be placed conveniently before the public so that people may have the largest opportunity to avail themselves of the improved device, whatever it may be. A merchant can determine his percentage of profits only when he counts up sales, and it is through a host of dealers that he can do so.

There are certain factors which enable a manufacturer to hold the market once it is obtained. Extensive advertising counts. It helps to fix the price of a good commodity. Every woman who goes into

a store is thoroughly enlightened upon the cost value of, say, the Bissell carpet sweeper. This is where she, the consumer, is protected by the fixed price. The good-will created for a business also counts. It is the experience of a large number of firms, manufacturing patented articles, that an established trade in a patented article will continue to be profitable for some time after the patent expires. With many enterprises it is necessary not to stop with the acquisition of a single patent or invention. It is necessary to acquire quite a few patents. It means protection against competition and keeping up the standard of excellence of patented goods. When thinking of causes for deduction in estimating the value of inventions, one must not forget that the employment of the invention may entail infringement of previously existing patent rights the acquisition of which will be necessary for industrial protection. Any royalty paid must, of course, be deducted in estimating the cost and value of a new patent. It is necessary to mark out a course and to go right after trade all the time. This can be done through salesmen or through sales letters. The latter are to be preferred. The average man has no faith in testimonials unless it gives proof of the statements made. A well-written sales letter is the equal of the salesman at any time, and it has the added advantage of getting in when and where the average salesman cannot. The salesman has only one opportunity to give his talk, while the letter has many; the salesman finds the prospect gone under press of business, while the letter can afford to wait until he returns; the salesman makes but one single impression which

grows weaker as time passes, but the letter continues to influence, gaining momentum as the days go by. Over \$106,000,000 is spent every year in direct mail advertising, and this includes letters. Advertising has overcome insuperable obstacles. The retail dealers of this country in all lines spend through the pages of their local papers millions of dollars in advertising, much more money than is spent by national advertisers.

After much thought, labor, and experiment the manufacturer will arrive at a satisfactory price for the new patented article. After more labor and large funds expended for correct methods of merchandising, dealer service will have been established. The dealers are now supplied and are doing a good service. Now comes the iniquitous price-cutter, the bane of legitimate profits. Price-cutting should be curtailed until it is harmless. The price-cutter, as we have seen, reasons that if he advertises a well-known patented article that sells regularly at \$3.00, for \$2.00 or \$2.25, the public is likely to give him credit for selling all other commodities at equally reduced prices; here is where he counts upon benefits. It is known that price-cutting has driven from the market many an article of the highest merit. It is evident that if the manufacturer of a patented article does not fix the price on his commodity and if dealers are permitted to cut it, the final outcome will be the selling of goods at such low prices as to destroy all profits for the legitimate dealer. He will never be able to weather the storm. Price-cutting especially concerns itself with new, superior articles, because their merit means a steady demand and the price-

cutter destroys the *profit end* of the new article for the maker.

It is more important to hold business after it is once obtained than to merely get new business. Price maintenance is one way. Sales may also be stimulated in new articles by issuing trade coupons. Some firms have obtained conspicuous success in introducing new products by the distribution of coupons, sometimes in connection with a sampling campaign. Great care should be taken to see that these coupons get into the hands of the actual prospects.

A chain is no stronger than its weakest link; therefore a business firm manufacturing patented goods, that has no market for surplus goods, cannot survive in times of emergency. A patented article is good the world over, and if there is a local or national market for it, there must surely be a foreign market for it. Even if the home market be disturbed, there is no reason why the foreign trade in the article may not be brisk. What an increased foreign trade means to the manufacturer, to the farmer, to the railroad, to the merchant, and to shipping is often underestimated or entirely unappreciated. Thus, upon the outbreak of the European war the price of cotton declined enormously, to a point almost below the bare cost of production, and thousands of planters in one entire section of our country found themselves not only deprived of their profits but actually facing financial ruin. Merchants and banks that had extended credits to the cotton growers were confronted by an equally serious condition. The whole situation had been brought about merely because a part of the European market for cotton had suddenly been cut

off. Finally men got together and adopted measures for bettering the foreign markets for offensive and defensive purposes.

That is one example. During the same period the wheat-producing belt of the country found itself in the midst of unprecedented prosperity. In spite of the fact that a bumper crop — the largest in the history of the United States — had been harvested, prices went to levels hitherto unknown. This was because some of the great wheat-producing sections of the world had suddenly been cut off from their usual markets in western Europe and the demand for American products had increased.

The western farmer, the grower of wheat, the merchant, and the banker in that part of the country, found out as never before how important foreign trade was to them.

To the manufacturer, however, foreign trade means something more than an increased demand for his products. There are few factories in the United States that are producing anything like full capacity. The average factory is probably producing, in normal times, at not more than seventy-five per cent capacity. If the manufacturer could find a steady and reliable outlet for this additional twenty-five per cent capacity, he would be able not only to increase his profits greatly, but to reduce his overhead considerably. It would enable him to sell his products at a lower price in foreign markets or perhaps both at home and abroad. It would give him a good foothold on the market.

By enlarging the market the manufacturer is enabled to maintain a steady demand. It should be recognized that a widely distributed foreign trade means greater

average stability. In most countries of the world prosperity or depression depends to a considerable extent upon agriculture and the state of the market for agricultural products. But it is also true of every line of manufacturing. Suppose that a manufacturer of agricultural machinery marketed his goods only in the United States. If there were a single bad year, when crops were not good and market conditions were not favorable, he would probably find his outlet for agricultural machinery considerably curtailed. Again, suppose that manufacturer sold his machinery not only in the United States but in Canada, South America, South Africa, Australia, India, Russia, etc. It would be quite unlikely that there would be bad harvests, bad crops, or bad market conditions in every country in the world, and perhaps, while the United States was experiencing a depression, Argentina or Russia would be enjoying prosperity. It is a case of not putting all one's eggs in one basket.

Patented articles will reach a high level of sale and distribution after the present war, both at home and abroad. But this country will rise to the occasion amidst the fiercest competition for international trade. After the war Europe will have to retrench. She will be loaded with tremendous war debts, and this will mean increased taxes, which will bear heavily on business and industry. Practically all of the elements entering into the cost of production will be raised. Good-will, which means only the advantage of a going concern, is already practically lost to many of the European belligerent nations; the labor and supervising force in Europe will be considerably reduced and its efficiency materially impaired. The

men who fought in the armies of Europe are not the unemployed or the unemployable, but are the very flower of the industrial and commercial enterprises. Many of these men will not return to their places in the factories or at the bench. Many of those who do return will be maimed and diseased, while others will have lost the "work spirit" that is such a large asset of the European worker. In the meantime capital has been withdrawn from productive uses, and all capital expenditures and capital investments have been reduced in efficiency. Capital will need renewals and repairs, which have not been made; therefore the demand for capital will be large at the end of the war, while the amount of it on hand will be small and expensive. Interest rates will be necessarily high. The elements entering into the cost of production will therefore be raised, and it is pointed out that prices cannot, even for a short period, be substantially lower than the cost of production. As a consequence of this, prices will be high, higher than ever before in Europe, and they will approximate the level of prices in the United States more nearly than ever before. The European nations will not be able to export to foreign markets and supply their own markets at prices as much lower than ours as they were able to do before the war, and the American firms should be able, therefore, to retain a very large proportion of our trade, holding a great part of the new trade that we obtained during the progress of the war. This is what appears to be the outlook in Europe when peace again prevails.

European nations will not be able to do more after the war than they did before. Domestic wants will

have to be filled before the European nations can seriously undertake foreign trade. No matter how much they may want it, no matter how much they may need it, they will first have to set their own houses in order. The war will be followed by a period of intense competition. As a result the most efficient producers and distributors will win.

After the war everything will be under tension. Scientific research and invention will be carried on in a manner never before contemplated. Already England, Canada, and our own country are planning to get a good part of the resultant trade. The nations will vie with each other to see which will obtain trade supremacy. During the war this country made a great increase in its exportations of manufactured goods, and there was a noted decrease in importations.

In view of what seems likely to come, manufacturers of new and patented articles should protect their salable articles in foreign countries at the earliest moment. If they fail to do so, they will be under a marked handicap against powerful organizations existing to push the sale of domestic articles made by the firms doing business in the foreign countries themselves. A leading banker has recently stated that when peace comes a new shuffle of international relations will result because of the new tariffs and trade treaties and in view of the existence of the strong working organizations among the industries in foreign countries. But no matter how formidable these organizations may be, patented articles may, if of superior merit, oust their products from a profitable market. A distinct advantage may be gained by obtaining patent protection abroad. Further, by

seeking patent protection on a wide scale rather than in the limited manufacturing field, the inventor would have a certain definite control of foreign markets; also by negotiating for the working or sale of his rights with manufacturing countries, he could protect himself advantageously as to the export of the patented devices from those countries or perhaps retain certain fields for himself. Thus he could keep his home factory fully occupied all the year around in the case of those devices which have a season trade in the United States, but which other parts of the world would require at a different period of the year.

In order to avoid making a fatal mistake in taking out foreign patents many American manufacturers test out an invention before even applying for a patent in the United States. To do this, however, the article often has to be sold, or published in trade journals, and this publication, at a date prior to the filing of a foreign, say a French application, would result in the placing in the hands of a competitor a certain means of defeating and defying the French patent which might be granted on such an application. An instance of this, well known to the rubber tire trade, came before the courts of European countries some years ago. In this case a full description of the invention had been given in American trade journals which reached foreign countries before the filing of the application, and when suit was brought under patents granted there, the defendant produced the American journals and was able to defeat the patent and continue manufacturing the device which he had put on the market.

In considering the profits to be made in the sale

of patented articles in the open, competitive market it is necessary to add that it is easier to make profit by offering several articles to the dealer than to approach him with but one line of goods. He may not be interested in purchasing some articles, but he may be interested in buying others. In the end this will represent profit. Generally to establish a reputation on a single article of merit and then to follow this up with other products is, everything considered, the easier course.

It seems that the majority of concerns which are now selling groups of more or less related products began with a single product or a single assortment and added others later. The Stewart-Warner Speedometer Company, as its name indicates, began its career in the national market, with a magnetic speedometer. It now handles warning signals, tire pumps, vacuum-feed systems for gasoline, and other automobile accessories. Perhaps the most common method of introducing a new product in a group is through the specialty salesman calling upon the trade and taking actual orders which are filled through the jobber. As a rule the specialty salesman devotes his attention to the new product and does not interfere with the work of the regular sales force that handles the established brand. By adopting a conservative policy any manufacturing firm will be able to buy up good patents on simple contrivances that it would pay to make as a regular or as a side line. Whenever this can be done to advantage it should be done.

CHAPTER X

PATENTS AS PROPERTY

THE possession of a patent does not assure, of itself, financial independence to the inventor, but, other things being equal, it will make money quicker when once on the road to success than any other species of property. Freedom from competition or an exclusive control or monopoly is the desideratum of the business world everywhere. The proper protection of a new business is of vital, everyday importance, and the best protection is universally recognized to be that secured by means of patents. Patents enable poor men to succeed where everything else fails. Mines and oil wells are becoming scarcer every year; there are few which remain undiscovered. Real estate takes an inside knowledge of conditions which none but men who give the subject deep study can hope to acquire. Taking all things into consideration, patents are today the greatest source of wealth.

However this may be, the invention or product of the inventor's brain must be adequately protected by letters patent in order to give rise to interest among capitalists and financial backers. Probably only those who have seen the great disadvantage of assigning a patent or an interest therein or in literary property on a contract for future payment can fully realize the consequences thereof. The title to a patent is not

to be compared with the title to real estate, because a patent is intangible property and therefore something which creditors cannot seize. Houses or farms may be taken and sold on mortgage, but this would not be possible with the species of property characterized by a patent. One could take a mortgage on a patent, but it is not practicable. The need of the right kind of protection is paramount in order to shut out competition. Unless an inventor has an exceedingly interesting invention, something above the average, he may not awaken the interest of an investor. In the use of an invention of ordinary merit the investor may reason: "What's the use of setting my patent attorney to work looking up the state of the art on this invention when he is very likely to find similar patents and possibly one that may dominate it? I won't go to the trouble and expense." Not every good patent is as "good as gold."

The importance of stimulating protection for new and meritorious inventions is gaining ground every day. It is significant to note how some of the founders of our country viewed patent protection. In 1742, when Benjamin Franklin invented the Franklin stove or, as it was sometimes called, "the Pennsylvania fireplace," he refused to accept a patent on it saying: "We enjoy great advantages from the inventions of others, so we should be glad of an opportunity to serve others by an invention of ours." That may be true, but it did not prevent an unscrupulous London manufacturer from making some slight changes on the Franklin stove, getting a patent on it, and making a large fortune from its sales. This is as true as the dial of the sun. Still Franklin was too shrewd a

business man not to know that if a manager is to give his time to the operation of a business, a demand for reasonable salary and compensation is fair. His deficiency was in not recognizing the services of inventors as entitling them to compensation. Experience has shown that the best compensation is by means of patents. This is the only view which squares with the facts. Nowadays people are more enlightened in matters of patent protection. A large number of investors, acquainted with patent rights, expect broad patents on the articles they are asked to manufacture. While no person can safely guarantee a patent, as the United States Patent Office does not do that, still the inventor, by taking all the necessary safeguards, can fortify himself in the possession of a good patent by taking the precautions outlined in previous chapters.

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CHAPTER XI

INVENTIONS AND INVESTORS

HAVING considered the factors outside the merits of an invention which determine the success thereof, it will now be convenient to consider the details which guide the inventor in finding, and in closing with, investors interested in or likely to become interested in his invention.

It is first of all necessary to know what the attitude of the prospective investor is likely to be, so as to come armed with the desired information. Salesmen always say that guessing the attitude of those they visit is the hardest part of the game of "landing the prospect"; accordingly, a few pointers on this matter will be welcomed. The investor expects information from the inventor who wishes to dispose of his invention either outright or conditionally, because the probability is that most of this information will be needed and, when needed, "like the Texan's pistol, it is needed badly; in fact it must be had."

The majority of investors have neither the time nor the ability to make an extended investigation of the inventor's proposition; they wish to get all the particulars at once. If one can present these forcefully, one is safe in assuming that the investors will at least consider any reasonable plan. Every enterprise should be investigated. The title to a patent is a very important thing. Every real estate title

is carefully searched before any deed is passed. It practically is the same with an invention; the title is the first thing that has to be searched. Do not hurry the investor. Do not burst like a thunderbolt upon him. Many inventors allow no time for manufacturers to consider their invention and the methods by which a novelty is to be made to pay.

In order to be at ease with the investor, whom one addresses orally or in writing, one must understand certain features of the investigation the investor will want to make. One should come primed with vital facts. Ordinarily, the investigation runs along general lines, whether the plan will be to sell an invention outright or get capital to start an industry to work the invention in which one is to obtain an important interest. The incentive for purchase on the part of the investor is profit, and in any event he has to confront the market conditions already explained. So some questions one will be expected to answer are:

1. Is there a sufficient and profitable demand for the output?
2. Will the output be sufficient to supply the demand?
3. Is the output of the proper quality to meet the demand?
4. Can the product be turned out at a figure that will make operations profitable?
5. Is competition to be encountered?

Some few enterprises are fortunate enough to have no competition. Usually, however, the competition is more or less severe. How much investigation is necessary depends upon the number of conditions which are known. The question of obtaining a patent

should hardly enter into consideration at all, for it is assumed that a patent has already issued.

But should one want to start out in the manufacture of an invention and aim to obtain capital, then one must be prepared to deal on equal terms with the investor; one's knowledge should be coextensive. One must be able to talk or find some one who is able to talk effectively, as most likely the investor will want to talk to the inventor personally or to his representative. The investor will be throwing out hints on a variety of subjects like location, rents, fixtures, amount of equipment, advertising, buying, selling, collections, bookkeeping, business forms, credits, etc., and will be asking repeated questions to learn about one's ability and business experience. The inventor should show that he realizes the importance of good advertising and of buying the equipment and stock cheaply.

If one has a meritorious article, he must not be timid. An investor may not be talkative and may think deeply. Sometimes it will be a good plan, in approaching manufacturers, to submit all references cited against a patent application by the Patent Office examiners. Too much attention cannot be paid to this important feature. The manufacturer will be in a position to arrive at a clear understanding of the mechanical advantages of an invention and will be better able to gauge market conditions.

Mr. Francis Cooper, in his invaluable book, which every inventor should read, entitled "Financing an Enterprise," goes exhaustively into the inquiries which an inventor or investor may have to answer concerning the joint enterprise. No matter how

small one's efforts toward getting the invention "placed" may be, or how ramified one's scheme or plan is, — no matter how far one may have advanced with any undertaking, he must be prepared to answer any or all of the following questions: It will be well to make a memorandum of them.

A. Nature of the Enterprise.

1. Is the basis of the enterprise sound?
2. Is the business of the enterprise profitable elsewhere?
3. What competition or opposition will be met?
4. What peculiar advantages does the device enjoy over others?
5. Can it be conducted profitably under existing conditions?

B. Plan of Organization of a Corporation.

1. In what state organized?
2. What is the capitalization?
3. Is the capitalization reasonable?
4. Has the stock been issued in whole or in part, and if so for what, — for consideration, money, or services?
5. Is the stock offered for sale paid in full and nonassessable?
6. Has any of the stock preference?
7. Is any stock unissued or held in the treasury?
8. Who has stock control?
9. Are the rights of small stockholders protected?
10. Are there any unusual features in charter or by-laws?

C. Present Condition of Enterprise as to Property.

1. What property or rights are controlled?
2. What is their value and how estimated?
3. Are these properties or rights owned or held under lease, license, grant, option, or otherwise?
4. If owned, are the titles perfect?
5. Are there any encumbrances on the properties or rights?
6. If not owned, are the holding papers in due form?
7. If not owned, are the terms of holding reasonable, satisfactory, and safe?
8. In event of liquidation, what would the property be worth?

D. Present Condition of Enterprise as to Operation.

1. What operations have been or are now being carried on?
2. What have been the results?
3. What difficulties, if any, have been encountered?
4. What is the demand for the product or operation of the enterprise?
5. What is the present status of the enterprise?
6. Are proper books kept?

E. Present Condition of Enterprise as to Finance.

1. What are the present assets and their actual value?
2. What debts, claims, fees, rents, royalties, or other payments, or obligations are now due or are to be met and carried?

3. From what resources are these to be met?
4. Who handles the money and under what safeguards?
5. What are or will be the running expenses, salaries, etc.?

F. Management: Directors.

1. How many members are on the board?
2. Who are these members?
3. What are their past record and present business status?
4. Who are the active members of the board?
5. Who are the inactive?
6. Are meetings regularly held and attended?
7. Who compose the executive committee, and what are its powers?
8. Are the directors stockholders and, if so, to a material amount?

G. Management: Officers.

1. Who are the officers?
2. What are their previous records?
3. What are their present special qualifications?
4. What compensation do they receive or are they to receive?
5. Are they able to work together without friction?
6. Are they interested in the enterprise beyond their salaries?

H. Management: Plan of Operation.

1. What is the general plan of operation?
2. What special reason, if any, led to its adoption?

I. Disposition of Money Asked for.

1. Does the money from the sale of stock go into the treasury of the company?
2. If any does not go into the treasury of the company, to whom does it go and for what purpose?
3. Of money going into the treasury, what proportion goes into active development and operation?
4. What part goes to pay off existing debts, obligations, and claims?
5. What part, if any, goes to pay for promotion expense, commissions, etc.?
6. How is the development and operating money to be applied?
7. Is the amount asked for sufficient to accomplish the desired results?
8. Will it place the company on a self-supporting or profitable basis?

J. The Proposition.

1. Is the general proposition a fair one?
2. Is the price of stock or bonds reasonable?
3. How do these prices compare with any former prices?
4. If common stock is offered, do preferred stock, bonds, or other profit-sharing obligations take precedence and to what amount?
5. What reserve of profits will be retained before dividends are to be declared?
6. If preferred stock is offered, is it cumulative, does it vote? When is it redeemable and at what price? What sinking

fund provision is made for redemption, and are peculiar provisions attached? Do any bonds or other obligations take precedence of the preferred stock?

7. If bonds are offered, what interest is paid, and when and where? Upon what property are they secured and when and how are they paid? Is the trustee or trust company of repute? Under what conditions are the bonds foreclosable? When or how are they or may they be redeemed? Are there any other securities taking precedence, and is there any peculiar provision in the deed of trust?

K. General.

1. What is the previous history of the enterprise, or the property or undertaking on which it is based?
2. If inventions enter prominently, what is the previous record of the inventor?
3. By whom are the statements made, and is the person making them reliable?
4. Are there any contracts or obligations not now effective by which the enterprise will subsequently be affected?

In the last analysis, securing money to finance a business depends upon the confidence one may inspire. The investor reasons: "Can you, as the *chief personal element* in your proposition, be relied upon absolutely, and does your business judgment warrant trust?" The factors controlling one's chances of getting capital are: (1) Personality; (2) Assets; (3) Proposition.

Personality means the power to inspire confidence. By that is meant not only appearance and presence but character and ability. Commercial bankers consider personality as the greatest of credit factors. Banks consider *ability* as relatively essential; *integrity* as absolutely essential; property not necessarily so.

The assets an inventor has show his ability to pay back should he contemplate a loan.

Is the enterprise based on a new invention or an untried scheme, and does it involve no new principle? Is the risk great? Do the chances for profit warrant the risk? Competition exists wherever the new enterprise is not based on an untried scheme. Invention may dispel competition; therein lies its true value. The propositions which have the best chance to secure backing are those that supply a want widely and generally felt.

When negotiations are reached bearing upon the compensation of the inventor, the manufacturer's chances of gain come first. The first thought the manufacturer will try to impress on the inventor during negotiations for a royalty agreement is that whatever amount is decided on, it adds just that much to the cost of the product. That is a fact and must be admitted by the inventor. During negotiations he must prepare for the rocks ahead. However, if a device costs less than a competing article or can be sold for more, it is admissible for the inventor to claim his share of such saving or extra profit. One must be on the lookout for capitalists who are likely to give help. Money is plenty, but brains are scarce. Deal only with earnest men, do not fool away precious

time with men who do not mean business. Again, it is necessary to remind the inventor that the moment he gets his prospective investor to make an initial outlay to start a business manufacturing his invention, he is fairly on the road to success.

Get the investor to buy, contract for, or pay for something which the business must have, which he can see is necessary and the road will be much easier than if followed in any other way. A small corporation is apt to prove very unruly. The profit is not large enough to divide among several, and the result is, there is a continuous scramble for the ascendancy in management and salary. In starting a factory and forming an estimate of the needed working funds, the amount should be made as low as possible, taking into necessary consideration the fact that a manufacturer is entitled to credit at the bank. The investor's first question is almost sure to be about the stock and material and the next about the fixtures necessary. Any of these expenses, rent, material, fixtures, machinery, and tools, are absolutely necessary to the starting and proper conduct of a manufacturing establishment.

CHAPTER XII

INVENTOR AND CAPITALIST

TO a large number of inventors, raising capital and meeting capitalists is more or less of a bugaboo, an affair fraught with difficulties, a drawn game. Of course, it is no simple task to obtain financial assistance; yet raising capital is only a question of a little study, application, and patience. It is not new. To many people it is a thing shrouded in mystery; but when considered properly, it is found to be much simpler than learning a trade and far easier than saving money out of ordinary incomes.

There is plenty of capital waiting for profitable employment. If the demands of labor are profit-destroying, the manufacturers will take more and more to machines. They will shrug their shoulders at the personal equation. There are capitalists anxious to get in touch with good ideas. It is necessary to proceed in a businesslike way to succeed. That many things lie unheard of for years is due simply to the lack of means of bringing inventor and capitalist together. The man who spends his life devising and inventing may yet hope to obtain assistance from expert manufacturers and salesmen. The nearer one is to his home city in marketing an invention, the greater the chances of avoiding fraud, the better facilities he will have for succeeding and for investigating conditions. If the reader knows how, he can

utilize the intelligence and labor of others. After all, the ability to do that is what distinguishes the work of the boss from the work of his employees. One must cultivate a successful attitude long before success will become his share. John W. Gates, who piled up millions of dollars in various enterprises, said that "many a man has lost a fortune by passing up an opportunity of getting into a great enterprise during its infancy."

Mutual benefit is the keynote which rings the loudest in the endeavor to bring the inventor and capitalist together. The manufacturer must have the inventor to make money and vice versa. Neither the capitalist nor the inventor is satisfied with his income. The majority of people have realized that the growth of income is not keeping pace with the growing cost of living. The man who never tried, never helped himself or any one else. The individual inventor with ideas can readily find a hearing if he has anything worth while. The inventor of a good thing has an easier and better opportunity to market his patent than ever before in the history of the world. Yet, strange to say, capital is getting more conservative. Investors are waiting for the *right* kind of invention. They will be glad to take it up and market it honestly and enthusiastically.

It must be conceded that the way the capitalist sizes up the opportunity of investing in patents is not the way the inventor sizes it up. The manufacturer views the situation from the standpoint that he is risking *real money*, should a later noninfringing invention be brought out by a competitor and supplant the invention he is considering, against what he *usually*

considers only time and material expended by the inventor; or putting it in another way, the manufacturer believes he is risking money made in the past from prior business enterprises — *a definite thing of known value* — against the inventor's submitting an invention the value of which is *undetermined and therefore an indefinite thing*. He figures that an inventor may be a genius, but he is running up bills.

Show the capitalist where *his benefit lies*, that the risks he encounters are only those incidental to any commercial undertaking, but that the benefit may be greater in the long run. The capitalist knows what it costs the dealer to do business. He knows that it costs the dealer from twenty to forty per cent and on an average above thirty per cent for overhead expenses before a profit steps in over and above the cost of goods. The profits made on some staple articles follow: Hats 54%, shirts 33 $\frac{1}{3}$ %, raincoats 37%, wrenches 42%, Welsbach mantels 33%, Yale locks 50%, glue 25%, pencils 45%, ink 22%, filing cabinets 50%, tennis balls 100%, films 33%, stoves 50%, shaving sticks 27%.

It is gratifying to know that men with capital have more confidence at present in proposed inventions than in the time of Murdock, the inventor of artificial lighting by gas. Sir Humphry Davy, an inventor of no little nerve himself, the one who devised the miner's lamp, asked Murdock if he expected to use the dome of St. Paul's for a gas holder. Sir Walter Scott made many clever jokes about it. Wollaston declared that they might as well try to light London by a slice from the moon as to send the light through the streets in pipes. The modern business man is compelled

to adopt new ideas all the time. He does not affect to see fancied spots in the sun. Changes sure to occur in the business world make it necessary that men should at all times have in reserve some definite plans of action in the event of disaster. An invention in the possession of anybody is this stepping-stone, an unworked mine. Many are they who have capital to invest but know of no paying investment.

The claim of inventors for special consideration is well recognized to-day, and it is known that they are among the greatest contributors to the world's progress. Thomas Edison said some years ago that he thought it was time that, in this country, the same brains and genius should be applied to selling and distribution that have been applied to invention. He made the remark: "Why don't you fellows who are selling goods invent something."

How far a capitalist will go in helping an inventor depends upon the measure of confidence inspired by the inventor. The old complaints, "It takes money to get money" and "I never had a chance," are an old song; money is *waiting* for investment. *It can be raised by any business capable of creating profits.* There is no use fencing with the question. The burden of proof is in the inventor; if he has a proposition of merit, he must show that it has merit. The inventor must plan, study his business, and take an active personal part in securing the confidence that will alone insure success. It is necessary to cater to the desires of the capitalist and to view matters from his angle. Let the inventor place himself mentally at least in the position of the investor and view his expectations through his eyes, taking due considera-

tion of his standpoint and telling him he is expected to reciprocate.

Gain the good-will of the capitalist. If one has reached the point where one assigns an interest in a patent, or whenever one has a consultation with a manufacturer about an assignment, one *should during the conference explain the legal provisions*. This will result in the agreement or compensation. As long as he understands these provisions, he will *defend* the agreement when he talks the settlement over with his friends. He will live up to his end of the agreement, for then there can be no misunderstanding. There will be no jarring of interests. One must not overlook his own interest. Once a business is started, to work a good invention the investor should take such steps for the safety of the business as may be necessary, such as obtaining a lease of the building, having the validity investigation of the patent conducted, etc.; but he should not bother with this personally; he will be interested in developing the invention, in seeing it made. The inventor's position should be that of superintendent with a salary at the start. This is even more important than being the president or business manager.

The manufacturer is expected to take the risk. According to the nature and importance of any patented article that seems to be good, a greater or less sum is spent. The secret of winning capitalists on the part of the inventor is taking a risk. A capitalist is expected to do so, so to be consistent, one must do so himself. All that is expected is to place an effective advertisement for capital. Perhaps ten million people in the last ten years have considered advertising as a

means of securing capital. How could they avoid it, since the evidence of what others do is constantly before them? But to "consider" was as far as they ever went. Why? Because of fear, ignorance, stinginess, — mostly these. It is strange, yet surprisingly true, that a man in the full possession of his senses can let a ten-dollar note stand between him and success. He believes, no doubt, in advertising and that it pays others, but he cannot see how it can ever pay him.

Why not? A newspaper page is no respecter of persons, so why should not one's own "ad" be as profitable as that of other people? A man will try to get out of his rut; he believes that advertising can help him; he actually sits down and figures out the cost, but being controlled by just one figure, he cuts down the length of the "ad" until it fails to be effective. He keeps chopping out more and more words until finally he inserts three or four lines and expects to pull \$5000. All this is nonsense.

However, if the great truth were known, it would be found that nine million out of ten million people never get so far as to write the "ad"; so tight is the human purse string. This very tendency keeps millions out of the running. But let it be remembered that if it is so hard for one to part with a little money for advertising, how much harder must it be for an investor to give up a great deal of money for a similar reason. It is diamond cut diamond. Therefore it will be necessary to put out a decent sized "ad" if one puts out one at all. Do not be afraid of a ten or twenty-dollar bill when it comes to advertising for capital. If one keeps at it he will win out, — will

give commands to others rather than meekly take them. The whole question of self-confidence lies in getting the first few replies. Practice on these. There are enough probable promoters. No class is so anxious for new and attractive propositions as that composed of wealthy men. They live by the labors of others and wish to continue doing so. This applies all the way up from the man who has a thousand spare cash to the one who has the coveted million.

Above everything else, let the inventor be true in his statements concerning the construction and operation of his invention. The prospective investor will hold him to his statements. A written statement will often be required of an inventor over his own signature. This report will many times be found of material assistance. A decided difference will sometimes be noticed between the verbal statement and the one to which he is willing to subscribe his name. Excessive claims, verbally stated, are usually tempered when written.

CHAPTER XIII

OPPORTUNITIES FOR INVESTMENT AND FACTS ABOUT INVESTORS

THIS chapter is especially concerned with inventors who are abreast with the best information on business and who have allowed no opportunities to slip through their fingers. Other chapters will be devoted to the treatment of subjects intended to make the mechanic-inventor conversant with the business end of selling inventions. However, every patentee should carefully consider the facts contained in this chapter. Getting capital is not the easiest thing; one must employ shrewdness and discretion. The investor must be made to have confidence in the inventor.

As to the nature and characteristics of patent opportunities, it may be said that if one advertises for capital properly, he will obtain prospects. By advertising, people know what is what. The better portion of the middle class includes those who usually answer ads for capital; they are the most desirable. They may just have reached the point where they see the need of more money, where they could better their standard of living with a bigger income. So they are precisely in one's own position from the money point of view. The inventor wants money to use; they have money, but want to make more. Every man of means is a fit object of approach on the part of the inventor.

The average man does not object to making more money, but he must be shown how. He must be given reins for his imagination.

Find out why the prospects ought to buy. Never approach a prospect without considering these questions: "Why should this prospect buy my goods? Of what value will they be to him? Will he be benefited by making this purchase? Will it be to his best interest to buy?" It is a great truth to realize that the average financial men of good standing are ready to help the inventor and give him capital, but they are not enthusiastic. They are waiting to receive with open arms the inventor with something of money-making value, but they want to be shown. They want to be somewhat sure so as not to squander a fortune. They have plenty of wherewithal, but they will consider no project which is on a sandy basis.

Of course there are men who are blind to real opportunity. Many investors fail to recognize a good opportunity. They are water-logged. We know of a man who, in the early days of the telephone, was offered a quarter interest in the patent for \$1500. It is reported that the rights for the whole state of New Jersey were offered to another man for a mere nominal sum. But investors are becoming more diplomatic in distinguishing between good and fatal propositions. They know which are likely to have a run of fortune. Many a good patent has gone a-begging or has been lost to persons first approached for the sole reason that they had but an insufficient acquaintance with the subject of patents and were generally unable to take the proper initiatory steps of investigation or were unwilling to incur the expense to do so. The

present book has been prepared for just such persons. It is necessary to open their eyes.

Big men do interest themselves in inventions. One of the largest capitalists of Wall Street, a banker of nation-wide fame, has interested himself in a score or more new inventions. One of them was a Thermos bottle, and seven or eight were electrical inventions of extraordinary character. A certain railroad president of New York interested himself in making steel rust-proof. A new organization for producing compressed gas names as two of its directors the heads of two of the greatest industrial trusts in the country. So it will be seen that if men of large means are at all interested in an undertaking, they usually take it up in its entirety and finance it either alone or with their associates. They are willing to come in for a share of the inventor's "luck."

The smaller the manufacturer, the better must be the merit of his goods and the keener his interest in patented inventions in order to gain a real advantage over his larger rivals. But degrees of merit will count with the big investor, if there is enough in it for him. Most men of means expect to get a controlling interest in a new undertaking. This does not mean that the inventor is to be frozen out, but simply that the inventor must give capital a good return, as it may mean the turning point in his career. A manufacturer may not care to bother about giving an article a better form or appearance, but he will be instantly interested in adopting labor-saving machinery in his plant to counteract rising cost. The article turned out may be the same or better, but there is a change on the method of production which appeals directly to

the pocketbook of the manufacturer. Such inventions always pay in the end. Labor-saving processes of demonstrated value and efficiency are what all men are lying in wait for, especially if the cost of replacement is slight compared with the value of machinery to be discarded in favor of improved machinery. No manufacturer will put an extinguisher upon projects to reduce the cost of producing an article.

Give facts to the investor. One must talk profits, but one's estimate of profits must be conservative, in keeping with the ordinary everyday experience of mankind. If one's figures are conservative, the investor will respect one all the more, and one will be in a fair way to succeed. Nothing goes without capital in the industrial world. Capitalists, recognizing this, are able to command the situation over the inventor. This is true as long as an enterprise is unsettled or unproved, while capital is of an established and known value. Be sure that if the investor does invest, he will part with the least amount of money to do business. Capitalists are usually able men of affairs. If one writes to manufacturers for financial assistance, one must remember that they are usually experts in their line. If the invention has merit, it ought to succeed. Although business men are often obtuse in seeing a good thing, and lukewarm in acknowledging it, as a rule they will seize upon anything of true value to them, by which they can derive some advantage over their competitors. It is not usually advisable to mention price in the first letter.

If one receives answers and arranges for an interview, it is necessary to bring the letter along for identification and as evidence of power to act in the matter.

In the case of many firms, callers may mean intrusion on the busy hours of a busy man. The inventor should himself suggest that the manufacturer or capitalist investigate his proposition. The intelligent investor will want to submit the prospectus offered him to the examination of men qualified by experience and study to talk intelligently about it as a commercial proposition. Investors who have lost money on inventions before, have a rule and here it is: "Never pay any attention to what the inventor *himself* has to say." Do not expect the investor to know much about a new proposition. Leave the door open for investigation. As a rule the inventor has spent months if not years working out the fortune-producing details of his plan or scheme to get the most out of his invention. It has become his pet scheme. But remember that as yet the investor is not imbued with this enthusiasm. It is absolutely necessary to interest him further.

Before placing an "ad" in the paper for financial assistance or writing letters to those who may be interested, it may be well to eliminate the money man indirectly if one can; if not, let him go ahead. The nature, character, and salability of the patented article one wishes to manufacture will determine this, and also whether one will want many or a few to help in pushing it.

A loom that costs \$20,000 to manufacture cannot be sold as if it were a breakfast food. There may be only fifty possible buyers in the country. Leasing is best adapted as a business method of placing a complicated machine on the market. Still there are some who will not consider the lease of an invention.

As a rule the United States Government, the biggest of contractors, will not pay royalties on inventions. It insists on owning its own machinery. Few inventors grow rich on mere royalties alone. The inventor can agree to sell his invention below cost, provided the buyer purchases another unpatented article from him on which he does make profits. To get the most out of any invention, one must become a manufacturer. That is the secret of the success of Edison. His method is that adopted by most knowing patentees. The presses used in the Government mint for coining metal are produced and sold by their inventor, Oberlin Smith. In Pawtucket, R.I., is a prosperous plant built by two inventors of successful metal-shaping machinery. The instruments used in the telephone central stations to record the duration of a conversation were invented by a man who is president of the company by which they are made.

CHAPTER XIV
*THE PRESENTATION OF THE
INVENTOR'S PROPOSITION*

NO one can overestimate the importance of this subject. There are quite a few questions which the inventor must decide for himself before preparing a prospectus that will explain all the details of exploiting an invention. The inventor should make up his mind whether or not he possesses the requirements of a salesman who could sell the invention when it is manufactured. If he can sell it himself, he need not be bothered with the trouble of properly presenting any proposition in the formal manner to be discussed hereafter.

It is best to be able personally to look after the details of making and selling a patented article. As an inventor, a man has certain strong advantages over all others. In fact, a man will not ordinarily get success out of doing a thing as other people do it. Inventors know this, and that is why they have done otherwise; that is the reason they took to inventing. After letting it be known that he is an inventor and has a meritorious article, a man should have no more difficulty in getting an interview as a salesman than as a promoter of his own invention. But he must come up to expectations. He should bear in mind that he does not usually have to combat the untractable and stubborn opposition which an ordinary sales-

man has to overcome in order to get an interview with a business man to sell him something. He does not have to hammer out his way.

The preceding chapters have shown that it is the consumer who will make or mar one's chances of creating a market for a patented article and, what is equally true, that one has got to see to it that one's invention is used. An unused patent will bring in nothing unless by luck some person notices it. What is worth doing is worth doing well. It is necessary either to start a business oneself for making and selling a patented article or else to get others to do so. But one must know what he is doing before he starts. If he bases his experience upon ignorance, he gets no results; if he bases his experience on some knowledge, he gets some results. But if one bases his experience upon applied knowledge, there is no limit to his success. There is then no chance to run up against failure.

Some lines of business call for a wide range of knowledge and ability which no single person can combine. For example, the owner of a manufacturing plant, may have expert knowledge of factory management, but he may be weak on sales organization. The inventor should take no chances. If his business experience is not sufficient, those who know should help him.

The inventor who has secured his patent has less difficulty in disposing of his invention than the inventor who has not reached this stage. His plans are not mere tea table talk. However, as soon as a successful model has been made, his chances have increased. Money will then be easy to secure, because if the invention has merit, only the business

risk has to be considered by the investor. Thus armed, the inventor is able to meet the investor with composure; he can put a good face upon the situation. To be sure, his patents are running out against him, but a moderate delay is not serious. At this stage the inventor may commit a grave mistake. If he begins the construction of tools and machinery, he is leaving the field of invention and invading the domain of business. He must then be very sure that he has the ability and means to carry the enterprise through the financial success. If he has not the money, he commits his worst mistake. The business cannot stand still; it must either go forward or backward. Rent is running, bills for labor and material must be paid, general expenses are mounting. Under these conditions business men will look upon the enterprise as a failure.

Having decided to enlist capital and the coöperation of the proper men to push the invention of merit, and having advanced far enough with it in the estimation of himself or others, whether of the Patent Office or among the consumers, manufacturers, or sellers, the inventor needs a prospectus, either elaborate or simple. This prospectus represents his battery of talking points arranged strategically so as to "pull" with his prospects.

Theoretically, a plain, honest statement of the facts and conditions, free from honeyed words, color, or prejudice of any kind and coupled with a reasonable offer, ought to get the money needed for a good enterprise. Occasionally it will, but in ninety-nine cases out of a hundred it will not. Such a presentation lacks attractiveness; it is a mere random shot. Capital

is timid and must be reassured. If this is not done, capital usually betakes itself off to some other enterprise, perhaps not so good but more attractively presented. The statements, however, while enthusiastic, should not misrepresent. An inventor is justified in emphasizing the good points of his invention and of setting them forth to the best advantage. He is also justified in showing why weak points are not fatally injurious. However, he should not state hopes as accomplished facts so as to lead investors to make false conclusions. He may state possibilities and beliefs as strongly as he wishes, but must not shoot with a long bow.

The majority of inventions to be financed are very inadequately prepared for presentation, due to ignorance or unwillingness to bear the expense or trouble involved. In framing the proposition, good common sense, judgment, and business ability can be employed to advantage. To properly set forth an invention to a manufacturer or purchaser it is essential to show:

1. Its advantages over well-known devices in the art to which it appertains.
2. Its cost, based if possible upon experience or taken from quotations given by reasonable parties for its production by the dozen, hundred, gross, or thousand, as the case may be.
3. The profits to manufacturers, wholesalers, and retailers.
4. The market to be supplied. This is determined in accordance with the nature of the invention, — whether it is an invention useful to both sexes, to children alone, or only to men.

The prospectus should be put into the right hands for perusal. One may be fortunate, indeed, if one secures a good manager, for a most important essential successfully to finance an enterprise and keep up the spirit of the personnel is efficient management. The undertaking may be meritorious, the money supply may be more than adequate, but without good management failure is almost assured. A good manager is not usually curtailed by a lack of funds. He can take his stand upon effort. If the enterprise is yet to be financed, the employment of a manager known to be competent and successful is of material assistance in securing funds. But even if one cannot enlist his service, his testimonial as to the merits of an article will carry much weight. If the manager is to give his time to the operation of the business, make his compensation liberal.

There can be no question but that a prospectus is needed. A picture never sold a piece of property except at a ridiculously low price. Accompanying the copy of patent there should be sent out to manufacturers a statement such as has been outlined above. If one can arrange for the prospects to come to see him, his prospectus will serve him in good turn.

Each prospectus should contain an estimate as to the probable demand for the articles or goods, the cost of the furniture and fixtures, and the probable expenses, sales, and profits for one or two years. One should put down every item one can think of.

The *presentation* of any enterprise which is well founded is either public or private. A poor prospectus is certainly worse than none. It should be well gotten up and artistically printed. Then it

will "take." In some of the largest cities there are bankers and others who make a specialty of preparing prospectuses. A good short prospectus of three or four pages costs at least twenty-five dollars and may run as high as fifty or a hundred dollars. It is usually possible to tell about how long a prospectus should be. The prospectus writers will not only get up the prospectus, but will also very often suggest other material and papers necessary for an effective presentation, and give other useful advice. If the prospectus is to be printed, the professional writer will take care of these details. In a private presentation this is unnecessary. Red-ink, capitalizing, and scoring prospectuses are helpful if not carried to excess. Legal cap paper is to be preferred when the prospectus is to be typewritten. The paper should be of good quality. Do not give carbon copies of prospectuses to important men. A prospectus should be tasteful and striking in appearance.

Do not begin a prospectus with the organization data of the enterprise or corporation but with some attractive matter of real interest. Sometimes the names of the financial backers are the most important items to state in the prospectus. Make the subject of the prospectus interesting and readable. State all the important facts of the undertaking, unless some are omitted purposely to be presented in other ways. (See investors' questions beginning page 98.) The presentation, however, should not be too full. Simply state enough facts to show the real value of the enterprise. The strongest appeal and most convincing arguments should be marshaled at the close of the prospectus.

To arouse interest is not hard. With a good proposition there is no such difficulty. We shall speak briefly of a public presentation of a prospectus, because that is something the inventor cannot safely attend to himself; it needs the services of a skilled promoter or one versed in such matters. It is necessary to send out a good deal of printed literature. The financial statement may appear in a separate paper which covers also the financial details of the company. The original patent papers, with verified copies of possible assignments, contracts, etc., accompany the prospectus; also a validity report. The opinion of the patent attorneys through whom the patent was obtained, would also be of some importance. If the invention is being exploited by a going concern, this fact should be adequately stated. If the enterprise has proceeded beyond the experimental stage, this should appear. If the enterprise has been profitable for a number of years, a statement showing the receipts, expenditures, and net profits should be prepared, and the prospectus should bring it out clearly; moreover, it should be verified by the certificate of an auditor. The nature of the trade in patented things should be explained and the reason for believing that the revenue therefrom can be increased.

CHAPTER XV

METHODS OF MAKING SALES

A CONSIDERATION of plans and methods for perfecting a sale of a patented invention or otherwise disposing of it is now in order. It is evident that any method of disposing of one's invention presupposes the existence of agencies and parties interested in the pushing of inventions. The easiest way in which to coöperate with these agencies will engage our attention first. If the inventor is of a scientific turn of mind and young, training in the higher branches of mechanical application and research, which at the same time assures reward for invention, is the *sine qua non*. Unfortunately there are few agencies where men may be trained to invent and where their inventions are taken up and pushed. One must attain success by regular stages. But during the war a good beginning was made. Canada stands first to-day among countries whose citizens are red-blooded enough to try new inventions. It is not surprising, therefore, that the Canadian Parliament recently appropriated many thousands of dollars to establish the Bureau of Industrial and Scientific Research. The plan includes the selection of university students who show an aptitude for investigation along certain lines, allowing them \$600 the first year and \$750 the second year. Subsequently they may either continue their investigations at college or be

transferred to industrial plants to make practical application of their ideas.

One's article must be of great merit in order that one may be in a position to choose any of several plans, some better than the others. It is comparatively easy to get mechanisms to produce an effect, but it is difficult to devise the best mechanism for the purpose, the simplest mechanism, the most direct-acting, the mechanically proper mechanism. A nearly perfect invention will bring other inventions to a full stop.

Recognizing the fact that the hardest part of the task of introducing the invention into favorable public notice is to get the thing used and tried, personal demonstration is suggested. Many articles, such as toilet preparations, smokers' articles, etc., may be demonstrated in store show windows, either in department stores or elsewhere. In this way an invention may be put in large letters before the public.

Demonstration is also a good policy whenever it is proposed to show the merits of any small article, — what it does and how it does it. In all such cases, what counts is the exhibition of the article to crowds of people who watch the exhibitor's movements in the window and concentrate upon the particular article he demonstrates to the exclusion of other articles or things. In a department store there is usually a large number of things which attract the observer's attention at the same time. But out in the street the observer has his eyes receptively open to what the demonstrator is exhibiting. An appreciation of differences will be keener.

The reader may know quite a few articles which

have been started fairly on the market in this way. An inventor of a novel shaving brush, having a soap fountain as a portion, demonstrated it by renting the windows of the best located druggists in several cities in succession and exhibiting the article in the show windows before large crowds of people. The arrangement he made with the owner of the drug store was mutually satisfactory. The article was one of merit, and the druggist recognized this merit. The thing was sold over the counters in the drug store and from the very start was a great success. Many, spurred on by the demonstration, purchased the article. Selling such articles almost at cost is often a good way in which to boost the sale in the beginning. One then depends upon the continued use of the article by the purchaser and its recommendation by him for ultimate profit. The recommendation of a satisfied user is a big boost for any article. This opportunity of exploitation should not be allowed to lapse.

If any one has started a business of his own for making and selling his invention, and wishes to gain notoriety by leaps and bounds, let him exhibit his invention at an Industrial Exposition. Hire a booth and place suitable display cards for public inspection. There are certain trade exhibitions or expositions, as they are called, held periodically in different cities where various devices are advantageously displayed. It is very effective as a direct means of bringing the merits of patented articles before the attention of a large number of likely users and is an easy way to get a footing.

In other words, the inventor must use his best business judgment, the same as he would if he were

engaged in any mercantile activity. If things look a little promising, newspaper advertising should be used. As the sales increase, this may also be increased. Great care should be used in selecting the newspapers. Consult an advertising man about this. Thus by proceeding cautiously, one step at a time on the right path, the inventor can eventually build up a lucrative business, a business that will be practically a monopoly. Sometimes we have seen, as in the case of a new food cereal, that the way to start a market for an article is to give away some free samples of it. The newspapers can be used for free reading notices. In the smaller towns of the country the local newspaper publishers are eager to print all the news. Consequently, when one of the residents of the town gets a patent, the publisher will usually be only too glad to print news articles about the invention. All this goes to advertise it. In fact, it is the very best kind of advertising. It should be obtained even if the publisher should require pay for it, for the chances are that other newspapers will copy the article and thus spread the news of the invention broadcast. News will spread about the merits of the device, if it is what it is claimed, and reprints may be as quick as a lamplighter in bringing prospects.

When the inventor finds himself in a position to dispose of his invention outright or on a royalty basis and when he can show that the success of his invention is assured and not merely something problematic, then "feeling out the pulse" of the buying public is the next best plan. It requires no trick of fortune to do this.

If the device is very simple in its construction, a number of articles should be made and, if possible,

sold to the most prominent people at hand who would have use for them. After they have used them, the writer should visit them in person and endeavor to get written testimonials endorsing the article and setting forth its advantages. By using a little diplomacy he can get the desired testimonials. These should be printed in a neat small circular. In this circular, give a clear, concise description of the article together with good cuts showing it. State the price. Too much care cannot be taken with the printed matter. In most cases it is best to engage a competent person to prepare the copy. Neat letter heads should be printed, also envelopes and labels. By sending out circulars in this way, following them up with a personal canvass of prospects, the inventor can gain some idea as to the reception his invention is to have at the hands of the public. If the results flowing from such steps should prove encouraging, the inventor should not permit the hope of great and immediate gain to overcome his good judgment. Otherwise he may fish in troubled waters. He should exercise his enthusiasm in his invention, but in the expenditure of money he should be extremely cautious and ever bear in mind that, for the present at least, he is simply feeling the pulse of the public and that it would be well for him to wait and consider before becoming heavily involved.

One should pay much attention to the letter heads and to the form and appearance of the sales letter he sends out to influence people. One should use only the best paper and get the printing done well. Use plain English words. Every letter should be clear, courteous, to the point, and should meet one's wishes as to fullness. When one writes the sales letter, he

should not give the idea from the tone of it that he has something to sell; he should not let his prospect know that he is simply after his money. Make him forget there is a cost attached. Use a little persuasion and tell him that he needs the new article and show him why. *Always talk for his interests, never for anybody else's.*

Again it is emphasized that, if practicable, it is always better to exploit an invention through a new concern than through an established manufacturer. As experience has shown, one can obtain much better terms in this way, because, with a manufacturer's firm, the invention is only one of its interests and is apt to be neglected, or otherwise pass out of one's hands.

An inventor may dispose of his invention by straight assignment, by royalty or license, by geographical or territorial rights, or by shop rights.

The straight assignment of the *whole right* in a patent for a cash consideration is a simple matter; but the assignment of undivided interests and the granting of territorial rights have sometimes caused the parties concerned endless trouble, especially when they have stood behind a screen. An assignment of a patent becomes necessary when one sells an invention outright. This is an excellent plan if the invention is good and admits of being sold outright. By this plan one cannot realize as much as one can by remaining interested in the invention and making part of the compensation contingent upon success, because the large risks taken by the manufacturer necessarily require a large return. The article the manufacturer buys to-day for \$1000 might be sold

by him the next year to another manufacturer for \$10,000 and by the latter in the following year to a third manufacturer for \$100,000. It shows the great and rapid increment of value attained by patents as the sales under them increase.

The assignor of the assignment is the party making it, and the assignee is the party to whom the assignment is made. To give the purchaser of a patent *legal* title, the patentee is required to sign a deed of assignment. This is usually prepared at the expense of the purchaser and has to be registered in the United States Patent Office. The patentee should be cautious in signing the deed put before him, as the wording may commit him to guaranties which he did not intend. The assignment should state whether it covers all the patent rights of the invention in the home countries only, or those in all foreign countries as well; also, whether the rights conveyed pertain to all patents for it or merely to the particular patent recited; also whether the assignment covers all improvements on the invention and how far these improvements are to be included.

Suppose the subject related to a paper box making machine. It should be clearly understood and stated whether the assignment covers merely the *patent* for the machine then pending or for other substitutes and divisional patents as well, and if it covers improvements; also whether by this term is meant merely improvements coming under and dominated by the *claims* of the patent, or all improvements in that type of paper box machine only, or improvements in any type of paper box machine, or improvements in all box machines, whether for paper boxes or metal boxes.

Failure to mention these features may lead to quarrels and to expensive litigation. To protect the assignee, the assignment should state that the assignor is ready to execute such new instruments as may be found necessary to carry out the expressed intent of the original assignment.

By means of an assignment one may dispose of the entire interest or title in a patent, either for the entire country or any part thereof; but when one *leases* the use of an invention, he is not granting away the title at all. We are now merely discussing the formal aspects of transfers of interest in patents. Soon we shall approach the question of what actually goes to the party to whom a particular transfer of a patent will have been made.

Few inventors realize the advantage which leasing an invention possesses over a direct transfer of title by means of an assignment. By this plan the inventor agrees with the manufacturer to take a percentage of his profits in consideration for transferring his patent rights. A cash sum may be paid in addition. The royalty may be reckoned in many ways; it may be a flat sum per article — so much per piece, per gross, or per thousand — or it may be a percentage of the regular selling price of the article, or a percentage of the net profit on it or on the difference between the selling price and the cost of manufacture. It may vary upward or downward as manufacturing increases or decreases from year to year and in a single or complex ratio. It may be reckoned on the articles manufactured during each royalty period, or on those sold, or on those not merely sold but actually delivered and paid for.

The inventor should not forget this, otherwise a shrewd party will take unreasonable advantage of him. It may be added that attorneys who are not experienced in this line of work are as apt to miss the point as the inventor is. In fact, even an experienced attorney has difficulty in anticipating every possible contingency, however vigilant he may be.

A contract of this sort or any sort which does not call for immediate execution in full by both parties, but is expected to be in force over a period of years, must of necessity be a long one in order to secure what it ought to secure to the benefit of the patentee by providing against these unforeseen contingencies. In royalty contracts some manufacturers base the amount of royalty on the estimated profits which will accrue eight years after the patent is granted, that is, when the patent protection is about half expired.

If a royalty contract does not provide for a considerable amount of cash down, it should provide for a minimum annual payment, e.g. \$500 on account of royalty, which not only secures the inventor a substantial income but is also a pledge of good faith on the part of the manufacturer.

The great advantage of royalty contracts is that the inventor does not sign away his rights irrevocably, but that, on the contrary, they automatically revert to him. Consequently he does not have to sue at law for damages or to have the rights restored to him. Including the delays with appeals, legal actions are not only costly but altogether destructive of reward for meritorious invention. Again, such contracts do not depend on the solvency of any of the parties. The really serious and able manufacturer has no hesi-

tancy to enter into such a contract, as it involves no disadvantage to him as long as he fulfills his engagement. Should the invention prove unsuccessful, he has the right to allow the contract to lapse and will not be responsible for further royalties.

One may assign outright in any territory, or one may grant an exclusive license effective in any given territory. A country can be divided up into a number of sections and the rights of each section sold or leased to a different firm. This is a good mode only in cases where there are many factories and where the trade of each is circumscribed. But the advantages of so dealing are very great because one can often get as much from one section as one could by licensing the whole country and still have the profits of the other sections. Again, if the inventor be successful in one section, he should have little difficulty in selling rights in the remaining section.

Shop rights do not as a rule call for much discussion. Quite a few may be sold either by active work of the inventor or of his agents. When an invention is sold in this way, it becomes unsalable as a whole because there exists no monopoly in it. Still it is the only way in which some inventions can be handled, especially shop processes; e.g., a process for gold extraction that could not be monopolized advantageously by any firm. Beware of making any assignment of a patent unless it leads to the introduction of the invention into the market as opposed to obtaining money with which to patent the invention. If the inventor has a little money, it is best to employ it in patenting rather than to spend it in promoting, especially where it is necessary to part with an interest in a patent in

order to get the money to file the application. But if he is to give an interest in the patent to secure this money, let it cover a sufficient amount not only to take out the patent but to build models, make experiments, and test out the invention on a commercial scale. He should figure on at least \$250 to \$500 in most cases. If he does not do this, he may have to part with another interest in the patent after the patent is issued in order to secure funds to make a working model; thus he will have nothing left for himself.

The reader having now been informed of the various ways in which he may *dispose of a patent*, the interest conveyed will now be considered. When one finds an investor interested in an invention, one must know the *exchange* value of an assignment, in return for the patent rights conveyed. One knows how much money to give when a certain price is asked for a certain article he buys, and now he must know what interest in his patent he should give in exchange for a certain sum of money or other benefits.

One may grant a *divided or undivided* interest in a patent. The nature of a patent property has already been explained. An undivided interest without restriction is an assignment which is unfavorable to the inventor and should be avoided, for unless the assignment provides for the contrary, the owners become tenants in common and are therefore at each other's mercy. Each may *use*, or *license* others to use, the patent without the consent of his associates and without any responsibility to the other joint owners for the profits arising from such license.

Any *joint owner* could license a foreign manufacturer

to sell the product in this country. Each can manufacture without restriction. If an inventor sells even a small interest in an invention, the owner of this small amount has *all rights* of the one or several owners of the balance.

Would the reader like to overcome the objectionable features of a joint ownership? This can be done by forming a corporation, the patentee assigning his patent for a certain portion or percentage of stock, or under an agreement in which the holders of a joint interest cannot sell *without* consent; also by putting the title in the hands of a trustee. The owner of a part interest cannot be compelled to join with the other owners in order to enable the sale of the whole interest to be made. This would enable one joint owner to prevent the sale of the whole interest and to hold up the other owners for an exorbitant price for his share.

The assignment records of the Patent Office show many instances where a percentage division retaining over fifty per cent indicated that the buyers or sellers expected to retain control. Cases are common where the inventor will hold more than half and sell the balance to others, presuming thereby he has retained control. In this view he is mistaken.

It is submitted that in putting the patent to work, the first consideration will be to select the class of persons to whom the public use of the invention would bring the most pecuniary profits. Such a class will usually be made up of the manufacturers of similar goods, because they are already equipped with suitable means to handle the invention.

Before one is in a position to judge what form of

transfer he should make, he must know who the most likely prospects are and how to prepare lists of them so that he may select the best names. It is also essential to understand the contractual relationships and mutual rights between the inventor and investor. This subject will be treated elsewhere.

We cannot close this chapter on methods of making sales of patents without a word about preparing mailing lists, a factor of prime importance in advertising. We read every day of big mail order successes. Mailing lists have produced fortunes for many business men. A publisher sold over a million dollars' worth of books through a medium of carefully selected names. A wholesaler placed a new brand of goods in record time and at unbelievably low cost by the use of mailing lists.

No salesman would submit his proposition haphazard to every one in his territory irrespective of his line of business and purchasing power. He applies the principle of selection. When compiling a list of names of prospects, one must do the same thing. In each case one must ask oneself, "Is this man a live prospect?"

The Addressograph Company, in a book published by them entitled, "The Preparation and Care of Mailing Lists," has charted in an admirable way the sources of names of prospects. Consider the names of some directories, such as the telephone directories of various cities, Brown's Directory of American Gas Companies, McGraw's Directory of Gas and Electric Light and Electric Railway Companies, and Thomas' Directory of American Manufacturers.

SOURCES OF NAMES OF PROSPECTS

Directories.

Local: City, telephone, blue book.

National: Rating books, trade directories.

Government Records.

Municipal: City tax lists, permit records, license records, marriage records, building permits.

County and State: Registration lists, county tax lists, secretary of state records, labor reports.

National: Income tax lists, labor records.

Organizations.

Business: Commercial clubs, advertising clubs, civic organizations.

General: Fraternal, labor, and social.

Advertising.

Magazines, newspapers, and trade journals.

Press Clippings.

Names of advertisers, society notes, fires, removals, real estate, business changes, new incorporations.

Miscellaneous.

Employees of local concerns, exchanging lists with other concerns, addressing companies, salesman's reports, investigators, R.F.D. carriers, customers, delivery men, bank cashiers, justices of the peace, country editors, and dealers.

Governmental records are a fruitful source of valuable names. The city clerk of any city will tell one what records to consult. It is not part of the city's business to supply these lists of names, but the city officials are at all times ready to give any responsible individual access to their classified records. Approach city as well as R.F.D. mail carriers when

they are off duty. One can get farmers' names, information about whether a farmer is a renter or an owner, how many acres he farms or owns, etc. Postmasters are allowed by law to verify lists of names and to cross out "dead" names. If one takes advantage of this, he must enclose return postage for the list. Postmasters will not, however, add any more names to the list. A good list to obtain from an addressing company is a list of stockholders in companies already organized, men who have already been successfully approached. One can get samples of such circulars by reading the printed matter usually obtained by answering the "ad" in any financial or investment paper.

CHAPTER XVI

CLOSING WITH INVESTORS

IN the next few chapters dealing with confidential matters it will be presumed that the reader is closeted with the author considering personal advice. In exploiting inventions, as in everything else, it is the last step that wins. The last step and the most important is to "close" successfully with the prospective investor. It is first necessary to get in touch with him. By advertising you can get the quickest results. To get started on the road to success, you need a factory. And to get it, you will place an "ad" in the papers for capital, get the replies, locate the investors by telephone numbers or street address, and determine by reading the letters which ones would be most suitable for your purpose. Have in view some location for your factory or salesrooms. The next thing to do is to see your landlord, the one of whom you expect to rent the place. Explain to him that you are to bring to him the man who is to pay the rent. Make an appointment with him to see him at the place at the right time, the same or the next day (depending upon how far away your investor lives and the number of favorable replies received). Then call on your prospect and tell him you want him to go and look at the proposed location. Do not spend much time with him and do not argue about the merits of your enterprise.

Meet him and take him to see the landlord. Introduce him to the landlord and trust the landlord to get a deposit on the rent or at least to get the lease signed. Do not be too anxious to hear all they say. Before long you will see them bargaining with each other. They will both lose sight of you temporarily. The investor will sooner put out some money for rent than put some money away in the bank for you.

You have now reached the point where it is necessary so to influence the investor that he will settle preliminaries. It is necessary to know what counts in influencing capital irrespective of those who are to direct this influence. When you approach the investor to increase his income with a sound proposition, you are doing him one of the greatest favors one man can do for another. Strive to get him interested in making some initial advance for the good of your mutual undertaking so as to see him act in good faith. Having placed the investor under an obligation, you are then ready to get the lease signed. Then you can talk about some form of contract and call in a lawyer.

People are usually influenced through one of the three following factors: (1) by the use of the eyes, (2) by the use of the hands, (3) by the voice. You may use all of these organs whether consciously or not. You have a definite purpose in mind in bringing your prospect together with the landlord. More dollars change hands every day as a result of personalities, friendships, feelings, and emotions than for any other reason. You must aim to place your investor in such a position that he cannot easily retire without damage to his feelings. Discipline him to

the merits of your invention. That is the reason you want to link up the investor with some supply or fixture man. Remember "you can drive a mule to water, but you cannot make him drink." It is just that way with investors. You must make the investor feel that by putting down the money to start the invention, he is doing *himself* the best turn in the world. Be open-hearted about it. He must do it of his own free will and accord, and such a frame of mind can be brought about only by the use of proper suggestions.

Size up your prospect whether he is a conservative or a radical. From your angle it is a question of money and how freely the investor spends it. One novel way in which to size up your prospect is to ask him a few side questions. If your prospect is a little conservative, if it took him, like yourself, a long time to accumulate a little money, do not pile up the profits too fast. He judges life by his own experience. Let him talk, and see if he tells you his ideas of money-making. He may be full of incident. In this way you can tell whether he is an enthusiast. You will see at a glance whether he will put the profit in the savings bank or will buy an automobile, that is the main difference between a conservative and a radical. You are now ready to bring the landlord and your prospect together for the purpose of getting the payment of actual money. All this is practical psychology, as clever use is made of suggestion.

Understand the psychology of inspiring confidence. First of all, talk about rents, machinery, and so forth. The amount of machinery you need and the cost thereof you can get from dealers in machinery. When

you show these figures to the investor, it looks like business.

Talk economy all the time, especially when talking of fixtures. The probable receipts and expenses for the first year of the undertaking are to be considered together. Every great idea goes through three stages. First, people say it conflicts with the Bible; next, they say it was discovered before; lastly, they say they always believed it.

You may not have to use speech to influence your prospect. Perhaps your model will win him over. Your model should be neat, well made, and as businesslike as possible. Do not underestimate this. A rickety model tied with strings and loose at the joints may demonstrate the principle beyond question. But suppose that in doing so the model breaks down once or twice or a joint becomes uncoupled or a string untied. The exhibition then will have to wait until due repairs are made and your nervousness is overcome. In the meantime the man with the money concludes that the thing will not work. In the minds of those looking at an invention, the character of the model has much weight. Better make the model neat, then you will have no trouble with it.

You must not only influence your prospect to think with you, but to take some definite action as a result of your representation. By getting him to pay the rent, or pay for a supply of fixtures, etc., you practically tie him up so that he must act. The majority of people interviewing a prospect make it too easy for him to slip away.

Sometimes you must offer special inducements. By all means, do not forget what has already been said

about the essentials of a good enterprise. They may be thus summed up: (1) A sound undertaking, (2) sufficient capital, (3) efficient management. In other words, you must know how "to cut through the ice." The easiest way is to get in touch with a prospect who is a good salesman and merchandising man. This will not keep a prospect from setting up a factory with his money or by the help of the money of others. It must be reiterated that when you are selling shoes, there is a ready and acceptive market for shoes before you manufacture them, but when you take a patented article of which the public knows nothing and you start to sell that patented article, you are confronted with a different problem. You have got to persuade the other man to whom you hope to sell that this something he has never used before is a good thing. It may cause a revolution of his habits or it may cause a revolution of something else; you have got to overcome that resistance. The man who handles a patented piece of merchandise is entitled to name the price, because if that valuable invention is to be distributed throughout the country, so that consumers will get the benefit, you have got to do those things which will enable the manufacturer to build a sufficient distributive organization. How can a very good thing that you invent get to a man in Florida, California, or elsewhere unless there are at hand those necessary means by which the manufacturer can handle the selling organization?

Let us be men and women of action; let us say, "I can, I must, I will." The further the inventor pursues his enterprise, the better for the inventor, provided he does not stop at any position from which

he can neither advance or retreat. You will understand why it is best to leave out the question of your salary from the initial discussion of plans. It is a bitter pill for the investor to swallow. Leave this proposition for a later time when you have the proposition well under way.

When the investor pays the rent or gives security for such payment, his attitude toward you will change. He will realize at once that he and you are partners. He will make appointments with you to get the stock, begin manufacturing, etc. Then you will find opportunity to discuss how profits are to be divided. If your proposition calls for less than \$10,000, you may be entitled to half and you might be foolish to accept less. Do not let any one get a dominating share of the business. The idea is, if you work regularly, you get paid. If he helps, he gets paid. This plan is excellent. If an investor will not even pay the rent, how can you expect him to lay aside a certain sum of money in the bank? Business is business; rent is not only necessary but reasonable and right.

The idea should be to see that the first dollars actually laid out are spent for something of value in your prospective business. Do not lose sight of this fact for one moment. Instead of, or in addition to, the landlord, you may enlist a drummer or traveling salesman to see your prospective investor and talk about a certain stock of machinery or goods you may want to use. The drummer will assume the entire brunt of the sales talk. He is trying to sell your prospect something he can see with his own eyes and feel with his own hands, something tangible, real, and material. He argues in a thoroughly businesslike

way. He is like the landlord who does not know how long it will be before he can find a tenant, and so he tries with all his might to get a new tenant. They know their business, the landlord and the drummer, while capital-raising is new to you.

As soon as you are ready, fix the interest which you desire in the new undertaking. Capital-raising is only a high form of salesmanship. Advertising is to-day the one supreme means of communication between strangers. The average man thinks more of his newspaper than he does of any one of his friends. The investor has the same regard for the newspaper which he reads. Do not ask an investor who is a mere stranger to you, to put money in the bank for you to use. Simply get him to assume an obligation. This is the new idea which should dominate your work. Obligation is so strongly recognized as a prime factor of business to-day that it has become quite a struggle on the part of the business man to place his new and old customers under obligations to trade.

If the invention seems to be good and is considered worth an investigation, a purchaser will ordinarily require an option for, say, sixty or ninety days. This usually will give sufficient time to make at least a validity and infringement search. The underlying reason for avoiding royalty contracts is that there is always sure to be a controversy as to the construction of the patent and therefore the scope of the agreement to pay the royalty.

Do not be anxious to rush into corporations without a sound understanding of what it involves. Business men may not care to buy stock in a corporation where they are offered common stock only. It does not

appeal to them. They prefer six per cent cumulative stock payable in case of liquidation of the company out of its assets before anything is received by the common stock. If the owners of the enterprise feel sure of the merits and the success of their invention, they can hardly object to this. The next point is whether the preferred stock should participate in dividends beyond six per cent and whether it should have the right to vote. The investors would probably insist upon both of these points. Whether or not they should be allowed these rights is purely a matter of business policy.

CHAPTER XVII
RAISING FUNDS — THE RIGHT WAY
VS. THE WRONG WAY — WHAT
PLANS TO ADOPT

WE have been informed upon the factors which govern the creation of a successful invention. The creation of a market for this patented invention, the attitude toward the prospective investor, what to do to win his coöperation, what plans to adopt to start a business manufacturing the invention, and what interests may be given to the investors in the patent itself have all been discussed generally. So far the primary object has been to give the reader the proper perspective concerning investors and their expectations, so as to set his mind at ease.

It is now proposed to treat of details concerning capital-raising, the methods of enlisting capital, the conditions to be surveyed, and the schemes and plans adapted for the purpose of holding capitalists and financial backers in the foreground of a meritorious invention. It is suggested that the reader give the present chapter his most earnest perusal.

Every inventor wants to raise capital to push his invention. There is plenty of money to be had if he goes about the task in the right way. There is no reason why he should not have a finger in the pie. The things you believe helpful may not really be so, therefore certain channels of capital-raising will be

suggested which you never realized before. The following matter comes from a prospectus: "In the state of New York alone the savings banks have on deposit over one billion dollars. This vast amount of money is earning only from three to four per cent. Within a radius of one hundred miles of that city there are thousands of clerks, mechanics, and professional men and women earning large salaries and having no business of their own in which to invest their surplus funds. All these must seek channels for investment. Every state of the union is prosperous. There is plenty of idle money waiting for all classes of investments."

Usually the inexperienced inventor, unaware of the best plans to raise capital suitable to his own tastes and abilities and mistrusting his own powers, lies in wait for some benign promoter to come to his assistance and lighten financial difficulties. You can positively do as much of the work of raising capital as any promoter can, and in nine cases out of ten you can do it better. It will be shown how you can take a man along with you to do the talking for you, should you yourself not be a good talker. This man may aid you considerably, but trust yourself chiefly. Prepare yourself thoroughly; look well to your own personal appearance; be as natural and as business-like as possible, and all will be well with you. You need not tempt Providence.

It is said that there are about seven million stockholders in mining, oil, and the smaller industrial companies located throughout the eastern states. A cheap way of reaching them is to get circularizing lists known to be composed of the names of such

investors. "From the producer to the consumer" is always a drawing card. Spend your own money; you do not always need to employ that of other people. Do your own mailing, and you will see that the stamps and literature you pay for are used. Surely you can interest as much capital as the so-called brokers, and can bring as much grist to the mill.

More important than *how* to raise money is *who* is to raise and get the funds needed. Whoever it is, whether another person or yourself, that raises money to start the working of your invention, he is a promoter. What are the essentials of a good promoter? It depends upon whether or not a professional promoter is meant. To be successful as a professional promoter, a man must have property, good business standing, and reputation. A commercial agency is the best means of finding out whether a promoter possesses all of these requisites. If their advice is not conclusive, find out from friends. He need not be a Napoleon of finance.

If you find a responsible promoter, you will have to make him an interesting proposition. He will want an interest in the enterprise, taking his allotment out of stock. The contract with the promoter should be clear on all important points and be formally drawn. He cannot guarantee to get the funds, but he will try to get them. The agreement with him should specify that his payment is to be earned and to become a claim upon the enterprise only if he is successful. If exclusive control of the undertaking is given to the promoter at the start the contract should specify when this control terminates. If the right kind of contract is executed with the promoter, the duties

of the inventor will be light, and the whole task of raising money will be on the promoter's shoulders. The inventor places everything, documents, statements, reports, samples, etc., in the hands of the promoter. He does the rest and lays out his own campaign. If necessary he will beat up for recruits.

A successful patent promoter must have technical as well as legal knowledge. He should be familiar with every phase of patent law in order to get the best results. The idea is to save the inventor considerable embarrassment. Avoid misrepresentations of promoters. You must have a rather big enterprise to warrant employing a professional promoter. As a rule, such a man is needed for the publicity end of a good-sized undertaking only. The inventor himself, his friends, or business acquaintances are best adapted for handling the project privately, that is, among acquaintances or within a small group. It is necessary to think twice about this. Again, starting a partnership usually calls for private promoting, while starting a corporation usually calls for public promoting. It is necessary to know when a partnership is better than a corporation and vice versa.

It is necessary to dispel the idea of employing the mail order promoter, who, whether he is wanted or not, generally manages to get the ear of the inventor first. There are some men who make good incidental promoters. The financial columns of a newspaper will attract men when "Business Opportunities" will not. Some brokers will finance unusually good enterprises, bankers seldom. Doctors sometimes make good promoters, particularly for enterprises which come within their province. Many lawyers are

instructed by their clients to watch for suitable enterprises. This is especially true of patent lawyers. Most good inventions pass, in some way or other, through the hands of patent attorneys. Do not deal with firms offering to sell inventions who require fees. In any event, don't let them tie up your patent. You should have a heart of oak in turning these "sharks" down.

It is well to tell the inventor about the various pet schemes of these "sharks" by which they swindle the unwary inventor or patentee. The advertisement of concerns of the public promoter type usually read about the same: "Capital secured for meritorious enterprises," "Companies incorporated, stocks and bonds sold, and enterprises financed," "Inventors and others desiring additional capital should see us," "We represent several private bankers, trust companies, and individual capitalists," etc. They all harp on the same string.

Concerns of this type will advise you to incorporate even if your invention has not been fully worked out and whether or not they know anything about it. Several such firms in New York City have received advertising not desired by their publicity departments, through police raids and proceedings in a criminal court. These have had a salutary effect. Most of these capital-raising companies get enough money from their clients to keep them going. They may make an attempt at advertising and soliciting money personally, but they are usually unskilled in handling inventions, even though they do understand various lines of business. Avoid these companies as you would avoid a hot iron. In New York City

and other large cities the following is a safe rule to follow: No matter what the pretext or how alluring the literature received, refuse flatly any advance payment demanded by a promoting concern. Reputable houses do not make demands of this kind. The Patent Office issues weekly the *Official Gazette* containing lists and addresses of the patentees to whom patents have issued the current week. These lists, primarily intended to be used as a source of benefit for inventors and business men, have been perverted by the "patent sharks," who circularize the patentees with their fraudulent so-called money-making schemes. Their pratings are enough to cause any man to make a wry face.

If for any reason you have to employ a professional promoter, secure the services of a lawyer to guide you in such affairs. See him before closing any agreement with the promoter or with the investors. If he is representing your own interests, he can guide you safely and intelligently where others fail. Retain him while negotiations are being carried out. Do not entrust the well-being of your undertaking to the lawyer of the other side. Lay the whole plan before your attorney.

Knowing when your enterprise reaches the magnitude that calls for the assistance of an efficient professional promoter is knowing just what your chances are of realizing the benefits from your invention at present or in the distant future. And in order to know whether you need the professional promoter, consider for a moment what a contract with a competent promoter calls for, especially in such large cities as New York.

Francis Cooper, in a most valuable work entitled "Financing an Enterprise," published by the Roland Press, New York City, states what terms should be set forth in any agreement entered into between a party seeking investors and a promoter undertaking to find them. They are as follows:

1. The agreement should designate specifically the enterprise covered by its terms.
2. The agreement should be confined to the immediate issues, to the one enterprise on hand.
3. The agreement should be clearly defined in its scope.
4. The agreement should be limited as to time.
5. It should make provision for any partial fulfillment of its terms.
6. It should provide for any modification or readjustment of the original plan.
7. It should state with precision the commissions that are to be paid.
8. It should state whether the commissions are payable on the net amount secured or on the gross amount.
9. It should state when and how commissions are payable.
10. If the promoter is to advance the money to pay the expenses, that should be specified in the contract.

You should prefer a private presentation of your proposition if the undertaking is not large. This is simpler, less expensive, and usually more within the inventor's own ability. When but few men are to be dealt with, the formalities are simple; the whole thing is manageable. The public presentation usually

contemplates a large number of small contributors. A private presentation enables you to get a partner and avoid the expenses of the long-drawn-out method of organizing a corporation. In doing so you play your best card.

A corporation is good only where an immense amount of capital is involved; also it is not bad where the interests are diversified to a great extent. But for the person who has a start to make in the world, the corporation is useless. It is so much easier to obtain a partner, so much quicker and less expensive. Selling stock certificates is ordinarily a very hard proposition, especially where there are no assets to show but the good-will of the promoter. It is good where you need more than \$10,000 in cash or have assets or an established business upon which to base your claims. It is good where a business has already been started.

Where you need a little money at the start, a partnership is the only sure and sensible course. It is easier to get along with one partner than with many stockholders. The best feature of a partnership is that your partner cannot force you out merely by his own sweet will. In a partnership it is customary that one puts in the money, the other furnishes the brains and does the work, and that both share alike in the profits. It is not necessary to squabble about these.

If your scheme or device is original and you have a good plan, employ business brains to work for you, directly or indirectly. Carlson had \$500 and an idea for a kitchen cabinet. Seven years later he had a \$50,000 furniture factory. Gates was a clothing salesman. He had less than \$1000. He invented

a scheme of selling clothing at a \$1 down. Within ten years, the extension of credit to the small salaried persons made him a large fortune. These men had ideas, clever schemes coupled with financeering genius. Why not at least imitate them?

It is only when you have an *established business* that the banks will help you. The question, "When does the bank say 'no'?" was put to the president of a large bank in Chicago. "Never, when the bank can help it," he replied. You generally consult the bank when you need more capital in your business. Why not do it when starting the business, which is the first consideration? It also means proceeding along the line of least resistance, the easiest way. There are exceptions to every rule. If you understand the mainsprings of human conduct, you can start big as well as small enterprises in an unusually short time.

Sometimes in promoting an enterprise, local personal pride enters as an important factor. It is well known that many small towns are seeking to have factories established there. If you can show the importance of establishing a factory to manufacture your invention in any such locality, you may easily raise the money from local residents.

If the enterprise appeals to, and will benefit, any particular industry or line of business, that fact may be used to advantage. A banker may subscribe to an enterprise which promises deposits to his bank. If a new grain elevator is to be established, the farmers of the neighborhood, who will be benefited by its erection, may be interested. Sometimes, offering some special person a position in a new enterprise will be influential in securing capital. He must, however,

be competent to perform the expected service. If the young man cannot subscribe himself, he will convert himself into a very active and interested agent of the enterprise and help you to find investors. You may cause some influential man to become interested by offering him the treasurership. Such men give solidity to the undertaking, create confidence in its future, and are a material aid in securing subscriptions. Some men act because their friends act, having themselves no intention of subscribing to stock. They follow the crowd. Some one is needed to make the start, however. If the "initial break" is effected, the rest is comparatively easy. They come in while there is a "high tide."

At the very beginning in looking for investors, it is necessary to obtain names and introductions. These investors may come from among your relatives, friends, and acquaintances or from among the general public. Do not waste time with relatives, friends, and acquaintances as a rule. We will tell you the reason. If you can approach them in the same way you can strangers, then by all means do so.

Be sure that the proposition presented to friends is a sound one. Friends will go into the enterprise largely because of their confidence in the promoter. They do not scrutinize his offering so closely as that of a stranger, and they naturally demand special consideration and better protection. If the enterprise is not successful, they think that their confidence has been abused. An unsuccessful enterprise is likely to make trouble for its promoter whether floated among friends or strangers. They do not care to listen to explanations afterward.

Therefore financing among friends, if conditions are right, is easy. The enterprise must be suitable, the proposition fair, the friends must have money to invest, and the promoter must possess their confidence. To get them interested, a pencil and a few scraps of paper take the place of a prospectus. If an enterprise is looked upon with doubt, the promoter's ingenuity will be taxed to remove the unfavorable impression. He must then be prepared to demonstrate the safety, suitability, and the profitable nature of the enterprise. If he cannot do this, he should not present the matter to his friends at all.

The soliciting method is the cheapest, but it is to be tried only where you cannot spare the money for an advertisement. It simply requires time and shoe leather. You call on any man in his office and explain your proposition. It calls for a little nerve and courage. After you have seen a few men, the awkwardness will leave you and you will be surprised at your own ability.

Circularizing requires that you send a circular to a few hundred or thousand business men in your vicinity. You should get replies in proportion to the attractiveness of your proposition. This plan is good in small towns where the advertising facilities are not of the best. If the circular is well written, the replies will be of such a nature that you will have a good chance to get a partner. It is slower than advertising in the papers. Its advantage is that, the postage being the main cost, one may prepare a list of names and mail a few letters from time to time. Its disadvantage is slowness.

It is possible that such correspondence alone will suffice. If the device invented interests the persons

addressed, they will surely not let slip the opportunity to get in touch with the inventor. If they are not interested, it is best for an inventor to know this early in the game. He will thereby avoid spending considerable money. The inventor of an improved shoe lace wrote and sent samples of his product to several large shoe manufacturers. It is admitted the results were disappointing; but if the shoe lace had been worth adopting, his letter would certainly have led to business. Where letters are sent out, they should aim to persuade and convince; they should contain the "punch" so as to lead to action. If a prospectus does not accompany the letter, the explanation has to be more lengthy. As no personal work is supposed to follow up the printed matter, the latter must be effective to induce action. Corresponding to the skill with which the printed matter has been prepared, the returns from circularizing vary from nothing to the most gratifying.

If your proposition calls for the organization of a corporation, circularizing will help. To get the best results from this method, it is necessary, *first*, to get the most up-to-date list of names; *second*, to send out the best kind of facsimile letter with the name and address perfectly matched at the top and accompanied by a well-written and attractive prospectus; *third*, about fifteen days after the first letter, to mail a second and then a third follow-up letter to those not answering the first. Above all, take pains with the first letter. You should get the best returns in this way.

You may try circularizing by way of experiment, but your effort in experimenting must be on a sufficient

scale really to prove the success or failure of the plan. Just what number of letters should be sent out depends upon the undertaking.

The letters should usually be very short. You may employ a letter and a prospectus. Business men do not throw away letters coming into their offices under two-cent postage and addressed to them, without first reading the contents, in whole or in part. The function of the letter is to present the important features of the enterprise with such strength and attractiveness that the interest of the reader will be aroused. The best authorities say that mailing investors a printed circular is not as good as sending an imitation typewritten letter. This, however, must be very well done.

It does not necessarily follow that because your prospects are very numerous, circularizing them is the best plan. The nature of the proposition is the determinant factor. People of small means do not like to hoard their money. The money should be working for its owners. Everybody knows and wishes for this. The modest three to five per cent of the ordinary conservative investment is, as explained before, not attractive enough. If these people can be convinced that an undertaking is reasonably safe and that by investing therein, they will secure at least eight or even ten per cent, with good prospects of larger returns and perhaps a doubling or trebling of the original investment, they will be ready to accept such a good proposition. The objection against public presentation is that in order successfully to work up this army of small investors, it is necessary to do extensive, expensive, continuous able work. Public presentation

is good where speculative enterprises are started, in which the risks are excessive and the rewards equally great in the event of success; but it may be safely said that this is not the way for the average inventor to realize on his own invention.

There are people around you, among whom you move, who can do you the greatest measure of good in closing with your prospect. Take the newspaper reporter as an example. He is among those best able to assist you in raising capital because of his experience, talent, and occupation. He can talk fast, write fast, reason fast, and argue fast, and he can do all these things remarkably well. Pay the reporter who is not too much taken up all the time with his work to assist you, to urge your prospect to a decision. Reporters are a determined set. The editor often sends them out to get a story at any cost, so they are used to overcoming obstacles. You should explain your position to the reporter after selecting a suitable sales method. The reporter will do all the talking necessary. He is usually a very good judge of men. You may pay him a contingent fee if you succeed in landing the prospect. While it is out of his line, he can adapt himself to soliciting for you. The reporter can also assist you in writing a "catchy ad." Reporters are a clever, brainy set. The landlord is not the only one, therefore, who can help, nor is the drummer.

Try the insurance man. Make an appointment with the inventor and take the insurance man along, having first acquainted him with your plan. The insurance man is always right at hand, easy of access, always ready, and always enthusiastic. He is therefore always greatly to be desired as an able aid in securing a

partner. Let him interview the prospects who answer your newspaper "ad." He has gone through the hardest trials of business, and therefore he can be expected to perform for you this important service.

Next comes the advertising man. An advertising agency is often instrumental in starting you on the right road to success in obtaining capital. Besides getting out the "ad" for you, some one in touch with the agency may help you interview the prospect. In a very large city you will find such advertising agencies.

Get in touch with an advertising solicitor of one of these agencies. Tell him what you want to do, ask his advice, and profit by his experience. As a class advertising men to-day are counted among the smartest of men this country produces. An "ad" man is always looking for some new idea, some new experience upon which to build a business education. He is always hunting the odd dollars. He is sensible, talkative, wise, a good thinker and reasoner. He is easy to find, easy to interest, and very important to enlist in business matters. He can write a nice "ad" for your prospectus. Offer to pay him a set price for each interview, contingent upon his or your success. Place your "ads" in the papers, secure the names of investors, and go after them according to any of the foregoing plans. You may use people in your vicinity in any of the ways already suggested.

But it is the lawyer you should consult at all times and at every stage in the marketing of your invention, and especially in disposing of the whole or a partial interest in your patent. You should also consult a lawyer at times in order to close with your prospect. Visit him and ask him first what his fee will be. Most

lawyers will prefer a contingent fee, which should not be over \$50 for each \$1000 you are trying to raise. That would be a fair price, as you must do the preliminary work, pay for the advertising, interview prospects, etc. If reasonably certain of the lawyer's ability, you can pay him a stipulated sum down. After having placed the "ad," received the replies, and selected the most promising prospects, get them to go with you to the lawyer, or take the lawyer with you to interview them. The lawyer is not working for his fee only; he values also the future legal business of the new firm.

You need the assistance of a lawyer even before you apply for a patent. Thus when a transfer of an invention or a patent is made and an inventor agrees to part with an interest before an invention is completed, there will be need of a contract for the future transfer of rights to the invention. This contract is not an assignment but only an agreement to assign. It conveys only an equitable interest, which equitable right may be enforced in a court of equity by a suit to compel specific performance. If there are conditions to be fulfilled by the transferee, such as the payment of installments or royalties, the perfecting or exploiting of an invention, its advertising and pushing, these conditions should be clearly and distinctly stated. Give the dates on which the installments or royalties shall become due, the manner in which they shall be paid, the amount of advertising to be done, its character, the ways in which the invention shall be pushed, or the degree of excellence in construction to which the manufacturer should be held.

An inventor may be entering on a contract for the

operation of his patent. Perhaps among the incidentals a satisfactory royalty is mentioned but no minimum production clause. Such an omission is, of course, fatal. The attorneys on the other side cannot be expected to call this fatal omission to your attention. There may be local laws materially affecting your contract of which the lawyer has particular knowledge. When dealing with strangers, it is best to engage an attorney to look after your legal interests. If your means are limited, let the attorney know.

Patent lawyers should, if possible, be consulted about licenses to make, use, or sell an invention. Never think of giving a license or arranging a royalty agreement without seeking the best legal advice obtainable.

Also seek commercial advice. The legal advice is necessary that you may see that there is nothing in the contract which will act to your disadvantage. The commercial advice is necessary that you may see that the terms of the contract are fair to the inventor compared with the advantage derived from the invention. Licenses are often most difficult to arrange to the satisfaction of both parties. There are many acts of the inventor which do not seem to be binding upon him if no good contract exists. But when it is too late and valid rights inhere by virtue of these acts, the inventor cannot repudiate them. If an article sold is of such peculiar construction as to be of no practical value unless it is used in connection with some subordinate parts, covered by another patent owned by the inventor, the right to use the latter in coöperation with the former might be *implied*

from circumstances. Shop rights are also implied licenses. A machine made with the *knowledge and consent* of the inventor before his application for a patent, carries with it an implied license from the inventor good for any purchaser.

Expert legal knowledge of the characteristics of a license must also be obtained by the inventor. A license to make, use, or sell in a limited territory, in the absence of an agreement to that effect, does not pass to an executor or an administrator. And a license cannot be taken possession of by an assignee or receiver, unless there is a provision for that in the license. Nor can a licensee, holding a license which is terminable at the licensor's option, manufacture a great quantity of articles ahead of time and sell them after the license is relinquished. Again, the man who puts up the money is shrewd enough to protect his own interests and is sure to hire a lawyer, as witness the protective clauses usually inserted in assignment contracts, or more specifically in royalty agreements: *that royalty may be deducted for all goods returned; that no payments will be made during any suit brought against an assignee; that the royalty terminates if the patent is decided invalid; that future inventions will also be assigned to the assignee.*

If you know just what kind of assignments to make, you are thoroughly primed when it comes to transferring an interest in your patent. An assignment is of the invention itself and may be made either before an application is filed, before the patent issues, or afterward. If made before the filing of the application, the assignment should refer to the date on which the application was executed and should be forwarded with

the application papers. If made after filing but before the issue of the patent, the serial number and date of application should be given. If made after the patent has issued, the number and date of the patent should be stated. This is in order that the Patent Office may identify the particular invention transferred. This is as necessary with patents as with land deeds.

An assignee of a patent should have his assignment recorded in the United States Patent Office. Immediately upon the assignment of a patent, send the document to the Commissioner of Patents, Washington, D. C., with a fee of \$1.00 for three hundred words or under. For documents over three hundred words and under one thousand words, the recording fee is \$2.00; for over one thousand words, \$3.00 is required. Upon receipt of the fee the document will be recorded and in time will be returned to the sender.

CHAPTER XVIII
*ADVERTISING FOR CAPITAL
LEADING UP TO A PARTNERSHIP OR
CORPORATION*

THE purpose of this chapter is to show that it is not a hard thing to raise capital if one does the right thing, if the right kind of association between the inventor and capitalist exists. Your chances of raising capital, if you go about it in the right manner, will be as good as one in four, so eager is the world to welcome ambition, so generous is the reception to the man who really tries.

It will be shown that forming a corporation or a partnership offers to the inexperienced inventor the easiest solution of the problem of raising funds. *If you are not inexperienced*, strike out for yourself and do not ask for any assistance. Make a noise in the world. Choose always the quicker method. By acting for yourself, you save valuable time and gain in publicity. You must be very careful in your preparation when you intend to rely on your own efforts. It is necessary for you to know the limits of your power and whether or not a matter is within your previous experience. You must be able to convince others of your ability to handle the enterprise. If you feel confident, however, then fight the good fight; plunge right into it, and you will get results. First, place the "ad" calling for investors in the papers. Next,

guard against discouragement, for just at this point most ambitious people fail. Either they are afraid to spend the money for an "ad"; or if they place an "ad," they insert only two or three lines in one paper and call that a fair test. They expect to succeed without a flourish of trumpets. Do not deceive yourself into thinking that two lines are as good as four, that ten are as good as twenty, etc. That argument is certainly false. More than anything else it has forced men to work on a strict salary basis instead of being their own bosses. In spending money to-day it does not pay to be wedded to an opinion.

Advertise for prospects. It pays to advertise and to draw on futurity. Get out an advertisement and make it *big enough* to attract. Do not be thin-skinned. Insert it at once. When you get the replies, you will see that it is only a question of time until you will get the money. Remember, this practical method is not only for to-day or to-morrow. Try it every time. Nothing is more important than selecting the right kind of newspapers. Pick out the best ones. Select the progressively conservative, not the radical paper; the truthful, not the false; the substantial, not the trashy; the masterful and sensible, not the sensational, — the paper the business man reads, and then you are sure to have your "ad" read by the right kind of people, those who have money. Financial advertising pays. Over a million dollars is paid to the newspapers of this country every week for just such advertisements as you are advised to place. It is out of the question that the people who spend all that money in one week are deceived. They are not. They are wise. They were convinced by the logic

of events, reason, observation, and experience. They do not spend by halves.

Use what is called a blind advertisement. It is a very good plan. A blind advertisement is one that states as much of your proposed plan as may be desirable and which contains either a newspaper number, a post-office box, an address in care of some one else, or any other scheme for securing inquiries without letting your own identity be known publicly. Use this blind "ad," because it is private and shows the relative values of various advertising mediums. It may pull as many results as any other "ad." Have it inserted in one or more of the leading daily or Sunday papers in your vicinity; you may even try the leading national weeklies. The following are chiefly held for this purpose: New York *Herald*, New York *World*, Minneapolis *Tribune*, New Orleans *Times*, Milwaukee *Sentinel*, Detroit *News*, San Antonio *Light*, Washington *Times*, Los Angeles *Times*, Cleveland *Plain Dealer*, Pittsburg *Despatch*, Cincinnati *Inquirer*, Denver *Post*, Boston *Globe*, Indianapolis *Star*, Portland *Oregonian*, Baltimore *American*, Des Moines *Register*, Kansas City *Star*, Omaha *World Herald*, Dallas *News*, San Francisco *Call*, St. Louis *Globe Democrat*, Seattle *Post Intelligencer*, Chicago *Record Herald*, etc.

After a few trials you will find out what the replies cost. You should get five replies for every \$1000 you want to raise; i.e., out of five, you are reasonably certain to get a partner with \$1000, out of ten replies, a partner with \$2000, and out of twenty replies, a partner with \$4000. In any campaign you will find that a reply from a \$500 man will cost less than a reply

from a \$1000 man because there are more people in the \$500 class than in the \$1000 class; again, many in the \$1000 class would risk part but not all.

If you can start with a small amount, then word your "ad," "A few hundred wanted" or "A few thousand wanted." The cost of replies should not be more than \$5 where any amount less than \$10,000 is wanted. In reality it will be found to be nearer \$1 than \$5. As a general rule, replies will not cost more than \$5 each; some have not cost more than 25¢ each. The average cost is about 50¢ for each \$1000 or less. Thus a reply from a \$3000 man would cost \$1.50; from a \$5000 man, \$2.50, etc. These figures are given in a general way as approximately correct. The circulation of newspapers varies from day to day. No one can tell what one "ad" will do on any given day; however, after finding out the cost of a few replies, you may be able to reach a basis for determining the rest.

If you have placed an "ad" for partners and failed to get them, it may have been either too small to attract attention or too poorly written. We are referring now to getting replies, not to landing your prospect. That depends upon the nature of your proposition.

Investors are not interested in flowery language employed in prospectuses. You cannot beat it into their heads by mere words. They want facts. If you have failed, do not let that discourage you, and do not be thrown off your balance. Put out a bigger "ad" next time and try a different paper. An advertisement costing ten dollars is practically certain of bringing replies. As far as publication is concerned, if it is a choice between daily or Sunday newspapers, you should pick out the one having the most financial

advertising or the one having the most classified business chances or opportunities.

After you have obtained a sufficient number of replies from the newspapers, what is the next thing to do? It is to select those among your prospects who will make the best partners or stockholders, so that you may be able to start the enterprise as soon as possible. A corporation should be organized for a growing business in need of more capital, while a partnership should be resorted to for the purpose of starting a business. A partnership is best even if you must come down a peg in your plans.

It is necessary to know why you should advertise for partners. Finding a partner is the best plan. The money secured through partnership belongs entirely to your enterprise. There is no interest to pay on it, and you are in no danger, when loans are sought, of being forced to go out of business to pay back the money. There is an old saying, "Choosing a partner is like choosing a wife." Many an investor says he is willing to join in your enterprise, but does not want to invest until all the stock is sold. When only one feels that way, it does not matter much, but when they all feel that way you are up against a snag. The very hardest part of selling stock when organizing a corporation is the getting of the first thousand dollars. That much real money in sight gives more confidence than can be secured in any other way. It is harder to convince twenty men than five. It is just as hard to sell one as another. Do not overmeasure your opportunities.

You must be sure that your partner will prove an asset to your undertaking. He should be of the right

sort, willing to coöperate when needed and to do nothing when not needed. *Before admitting a partner you should know:*

1. About his ability, his past record, his standing in the community, his technical knowledge, his education, his personal habits, and his financial expertness.
2. Whether his knowledge, experience, and ability complete yours, and whether you could work with him to advantage.
3. Whether he has a disposition that inclines him to restlessness.
4. Whether he is ambitious; whether he will put his best efforts into building up your concern.
5. Whether he is honest; whether his character warrants complete trust.

Do not believe that the party you deal with is of no importance and that the main thing is to get the money. Do not simply lay his funds under contribution. Never join with one whose dealings you cannot approve, whether as a matter of business honesty or business prudence. If you do, you are sure to regret it. Your business associates should be of the same disposition as yourself. If they have foresight and executive ability, they have the qualities especially needed. Where it is a question of preventing a miscarriage of the entire venture, it is to your interest to select some one in whom you can confide.

In a partnership contract, see that the following stipulations are included by your attorney:

1. Provide for joint appraisal or an arbitration committee to settle differences between your estimates of the values of the business.

2. If one partner presents a proposal for the dissolution of the partnership, the other should have the right either to buy or to sell.
3. Even responsibility in the addition of new capital.
4. A clear division of duties.
5. The amount of profits to be taken out of and the amount to be put back into the business.
6. A fair interest on all investments.
7. A salary basis, in case profits are not divided evenly.

Always choose the practical man to shape the destiny of your affairs. Any man can distinguish between a business success and a business failure, between an experienced and an inexperienced person, between the novice and the dunderpate, between a practical man and a doctrinaire. In every case prefer the practical man.

Unless your partner is the right kind, he may merely prove a dead weight. Remember that taking in capital means sharing the profits and sharing the risks. Again we say, be careful of your associates as partners. An inventor once advertised for capital to float an enterprise. He received five answers, four from chattel mortgage sharks and one from a man who had a little money and desired employment for *himself* as well as *for it*. The inventor accepted the last offer. His partner appeared at first to have some ability. The inventor's good opinion of him did not last, however. Every night when the inventor came in tired but loaded with orders, his partner would be waiting for him with a typewritten list of matters upon which he wanted to consult. The

inventor would skim through the list and tell him what to do. What he was told, he would always write down for fear of forgetting. He had waited for orders until he could not overcome the habit. In a few months, capital ran short. The partnership was dissolved, although the interest in the patent was still divided. Later the inventor sold the patent for \$10,000 and was obliged to give \$5000 of it to his former incapable partner. It is not like hiring an employee whom you can always fire, but a case of always having to divide the profits when you dissolve. There is no saving clause to overcome this as long as it is a partnership arrangement.

How about a corporation? A corporation is an artificial creature in law, consisting of one or more persons united in one body under certain grants to secure a succession of members without changing the identity of the body. It is empowered to act in a specified capacity or to transact some designated business the same as an individual. A closed corporation is one in which vacancies are filled by the corporation itself. A sole corporation consists of a single person at any one time invested with certain legal capacities and powers not otherwise possessed. A joint stock corporation is one in which the ownership of stock is divided into shares. A close corporation is an incorporated company the stock of which is held by a limited number of persons and is not in the hands of the public. Usually in a close corporation there is an agreement or understanding among a few stockholders, whereby each is prohibited from disposing of or selling his interest without consent of the others.

Capitalization is the bone and marrow of a corpora-

tion. To the inventor about to start a corporation, the question of capitalization is doubly important because it measures his own interest in the company. In this aspect capitalization has two entirely distinct and very important functions: (1) as a convenient means of apportioning the interests in the company, and (2) as a measure of giving value to the enterprise. Suppose a partnership business owned by three partners and valued at \$100,000 is to be incorporated. One partner owns a one-half interest and each of the others a one-quarter interest. One hundred thousand dollars will be the capitalization of the new corporation, and this will be divided into shares of equal value. Suppose the par value of these shares to be \$1000 each; there will then be a hundred shares in all, of which the first partner will receive fifty and the other two partners twenty-five each. If the capitalization should be \$50,000 instead of a \$100,000, the number of shares would be changed, but the proportion of holdings would be the same. The first partner would have his one-half interest and the other two each one-quarter interest, as before. The basis of calculation is different, but the results are the same.

Let us say an inventor devises some mechanism. It is not demonstrated or patented, but it probably exists as a rude draft or model. The device must be worked out, and for this purpose the inventor must secure financial assistance. He will go to a few friends and try any of the methods already suggested. Suppose he obtains \$1000 to complete his invention and offers the investors a one-half interest, reserving the other half to himself. Two or three of these people

may form a little pool, one putting in \$500, another \$400, and another \$100. A corporation would be formed. This corporation, however, cannot be based on value, because real value of the untried invention as yet hangs in doubt. The capitalization is simply made to measure the interest of inventor and investors. In order to save big corporation fees a small capitalization will be best, say \$2000 divided into twenty shares at \$100 per share. Of these shares the inventor will take ten; the first investor, five; the second, four; and the third, one. This company would be looked upon only as a temporary bridging arrangement to carry the enterprise to a point where the value of the invention might be determined. When the invention is completed and it becomes necessary to increase capitalization in order to make it represent the real value of the invention and the enterprise, reorganization will be necessary. The new idea of the value of the enterprise comes in. The capitalization of \$2000 no longer represents value. It represents the proportionate holding of shares by all the stockholders.

It is necessary to understand how the stock is divided among the prospective stockholders; also how the stock is to represent the inventor's real interests. One way of passing a controlling interest in a corporation to a certain class of stockholders is by means of preferred stock. This is a better scheme of raising money than the issue of bonds or a loan protected by securities. An issue of preferred stock is preferable to a bond issue, because preferred stock receives dividends only if such dividends are declared. Bonds may even endanger the very existence of the under-

taking, for it is necessary to take steps to meet the loans. However, sometimes a bond issue to be attractive is made profit-sharing. It may be provided that in case preferred dividends are paid at a certain date and fall in arrears, preferred stock shall have the right to vote, or that control of the company shall pass to the preferred stockholders.

When stock is issued, it should be fully paid and nonassessable. This encourages subscriptions. In any event, it should be noted that stock not fully paid, either technically or actually, subjects the party to whom it is issued to a liability for the unpaid balance as long as he holds the stock. The corporation claims the payment. The courts hold the stock to be fully paid if an invention is given for stock. Capitalize in the right way and leave watered stocks alone. Watered stock means an increase in the issue of capital stock with no corresponding increase in assets. It is of no consequence when used to place control in the hands of any class of stockholders.

Investors may be expected to make exacting demands. They may wish to control the company. The control goes with the majority of the stock. The persons owning this majority usually elect the board of directors and through this board control the company. However, the control of the corporation may be given to the investors in different ways:

1. By giving 51 per cent of voting stock to the investors, the inventor retaining but 49 per cent. This gives the investors little more than one half the stock.
2. By giving an equal division of the stock, the inventor being deprived of the voting power.

3. By issuing a portion of the inventor's stock as nonvoting preferred stock. This is not contrary to any laws.
4. The stock might be divided equally between inventor and investors, but the board of directors to be selected acceptable to both and the management to be left to a voting trust.
5. Stock might be divided equally between the two parties, but so classified (that the majority of the directors would be elected by the investors' stock).

The inventor should always be careful about protecting his own interests. Where the inventor has not bound himself and has found an investor or investors, it is better for the parties to organize a corporation (with the assistance of a dummy where necessary), especially where the amount needed to start business is considerable. Make a contract with the investors from the very start, fixing not only the interests involved but also certain exact relations and regulations as to the mutual conduct of the parties, e.g., that a certain amount shall be invested, that neither shall sell his interest save with the other's consent, that the invention shall be salable, and that either shall agree to sell his interest to a third party at a price fixed in advance. These and other contingencies can be provided for.

The personnel of the corporation is of the utmost importance. The organizers or controllers of the company do not need to be mechanics or persons of business prominence, but they should be men of affairs and able at least to know a good man when they see one. Him they should elect as executive head. Un-

less this is done, if the stockholders are ignorant of business affairs and incompetent to manage a business concern themselves or to perceive their shortcomings in this respect, the concern will in nine cases out of ten go to the wall before it has been long in existence. It is just as necessary to bring in good judgment with the capital as it is to start out with a good invention, especially where the task is to reap profit out of the venture.

The board of directors controls and guides the affairs of the corporation. Its members are elected by the stockholders in the following manner: If the board of directors is composed of five members and there are two classes of stock, each class will be given the right to elect two directors, and by agreement among these a fifth director may be appointed. If no agreement is reached, then the board will have to get along with four instead of five members.

Eliminate the promoter from organizing a corporation. He may enter into the factors that determine the capitalization of your enterprise. At the time of the organization of a corporation, the equality of corporate assets and issued stock perhaps holds true; but in time, as business develops, it does not ordinarily exist, owing to fluctuations in the value of stock, market conditions, etc. Variations between the value of the enterprise and its capitalization are supposed to be reflected with more or less accuracy in the market quotations. However, value is the obvious basis of capitalization. Sometimes the capitalization of a new enterprise is complicated by the necessity for payments to promoters. The inventor should avoid the "promotion" idea of his invention if he can

possibly help it. Payments to promoters are necessary in order to reward them for their services in bringing moneyed people together.

Very frequently it is difficult to know exactly what offer must be made to secure money. Sometimes overcapitalization may be inviting to capitalists even in cases where the inventor gets half the stock and the investor the other half. Suppose an invention is worth financially \$200,000 and that it requires \$25,000 for operating funds. If the large investors are appealed to, in order to attract them, you must give \$100,000 in stock or even more for the required \$25,000 in cash. If, however, the investment is apportioned among a number of smaller investors, each putting in a few hundred or a thousand dollars, it is probable that from \$50,000 to \$75,000 face value of stock or less would be enough to raise the money. Under this second plan the stock given for the money would be at least \$25,000 less than under the first. Against this, however, must be set the additional trouble of reaching smaller investors. In either case, if services of promoters are necessary, the cost of getting money will be increased by the amount given these promoters, the value of the owner's interest diminishing as the amount of stock given for the money increases.

In capitalizing enterprises founded on inventions, the anticipation of earning power is customary. Any close estimate of these anticipated profits is, of course, impossible. The capitalization must be large enough to take into consideration future emergencies. Profit probabilities are usually capable of approximation. Profit possibilities are not, as the grounds of expectation are too uncertain, too remote, or too unknown.

Selling stock is about the hardest nut the inventor has to crack. Investors may fool the inexperienced inventor into believing that they are organizing a corporation when, in fact, nothing of the sort is done. It is necessary here to untie a knot. If the investor demands a nonvoting, nonparticipating preferred stock, or perhaps an issue of bonds to represent the actual money invested, the undertaking is not in the nature of stock investment but is rather a loan, a fixed charge and liability imposed upon the assets of the corporation. Of course, the investors receive dividends and interest and finally receive their money back. Capital expressed in shares of stock is thus different from a loan expressed in bonds.

Capitalization is defined as the face or par value of the stocks and bonds which the corporation has issued. In every state of the union the laws providing for incorporation either directly or indirectly require the corporation to have a specified capital stock. The amount of this capital is, in most states, fixed by the charter of the corporation. The parties to the incorporation determine this before application is made for a charter. It represents the amount of money which the incorporators think necessary for the successful operation of the enterprise. Thus if they capitalize at \$25,000, presumably they either consider this amount of stock requisite to the purposes of the undertaking or believe that dividends can be paid upon that amount.

In certain states a certain proportion of the capital stock must be paid in. It must have been issued for value received by or for the corporation prior to the act of incorporation or before it begins business. Thus

in Maryland one fourth of the capital stock must be paid within one year of incorporation, and in New York one half must be paid within the same time. It is usually sufficient, however, if that payment be made in property or services. In the District of Columbia the provisions are more severe. Here the entire capital stock must be subscribed for in good faith, but ten per cent of these subscriptions must be paid in cash in good faith before the charter is even filed. So it is necessary to consult the state laws concerning the full payment of all issued stocks. Every dollar of outstanding stock is supposed to represent a dollar of value actually received by the corporation.

Raising capital for stock is easiest when your friends or business associates will subscribe. Always consider whether interested stockholders will be a help to your enterprise. A plumber decided to raise capital to finance his invention. He had some resources of his own and could have raised the necessary money by borrowing on his collateral and on personal notes. He reasoned, however, that if he should form a corporation and sell the stock to the plumbers in the district where he expected to do business, the success of his venture would be assured. The plan succeeded. The users of the company's product were directly interested in its welfare. Their support alone secured enough business to establish the enterprise.

Again and again do "ads" appear in the papers calculated to raise money for stock incorporations. Take into consideration that some men buy stock because their friends buy. Selling stocks by means of expensive prospectuses has already been discussed.

The smart stock salesman never asks for all the money at once. It is usually the case of ten per cent down, balance in installments. The investor always has an eagle eye for the safety of his principal. He wants profits. If you are well informed, you will sell stocks easily. The investor will not ask you one tenth the number of questions if he sees that you understand the subjects with which you should be familiar. There are many inducements held out to prospective stockholders for buying stock. Let the prospective investor have the opportunity of investing at ground floor prices. Do not ask par for a corporation just beginning. Start a limited number of shares at a fair price and create a market for them through circularizing. You can then offer the next allotment at an advanced price. Treat the investors rightly. Give them a square deal for their money.

In due time a corporation organized under excellent business managers, pushed forward in a good market, and meeting with satisfied consumers, will "cut a melon," which means that the corporation will make an extra distribution to its stockholders. This takes the form of an extra large cash or stock dividend.

CHAPTER XIX

SALESMANSHIP AND BUSINESS — GENERAL CONSIDERATIONS

QUESTIONS of policy arising in the course of marketing an invention must be considered upon the broad lines of salesmanship and business. As a knowledge of the principles of business with their peculiar bearing upon patents is of the utmost benefit to every inventor, it calls for separate mention in this work. This chapter deals with the salability of an invention. A machine can be made to do almost anything but sell goods.

In every sale, three factors are to be considered: (1) the goods, (2) the salesman, (3) the buyer. A sales talk is anything communicated or issued having as its object the making of a sale. Before you are ready to effect the sale of any article, your proposition must be just right. The man who thinks seriously all around his proposition, who studies every objection that can possibly arise, who sees mentally the temper of his prospect and adjusts himself to it, is the salesman who will bubble over with enthusiasm, energy, and determination which the prospect will find it difficult to resist. Every proposition must be resolved into its elements. If you do not grasp your proposition yourself, how do you expect to make it clear to your prospect? Understand that every sale is made in the mind. Four steps constitute every sale: at-

tention, interest, desire, and decision. Selling requires a knowledge of the working of the human mind. You must make your prospect think as you would have him think, and you must know what thoughts will produce the right kind of action. You must use suggestion in getting your prospect to display the right mental action, which may be instantaneous or require time. When you make a sale, you make it because of what your customer thinks. He must be made to give a willing ear. To be successful you must understand the line of thinking that will make him buy.

Any salesman knows the importance of obtaining the right attitude of a prospect before making a sale. Always get the buyer's point of view. Shape your selling talk so that you can change from one motive to another instantly. There are generally a number of motives that will prompt people to buy any line of goods. You can generally find out what a man's experiences have been before you have gone very far with your talk, provided you give him an opportunity to tell you.

In trying to influence men, you may feel your prospect working with you or against you. You test the springs of action. The man who can hide his thoughts is generally the man who figures and deliberates. He is a sound and logical reasoner and generally successful in business. The voice is the most important factor in making a sale. When you make a statement to the average man, look him straight in the eye. You may use your hands in making appropriate gestures; you cannot avoid doing so at times. A hearty handshake is an effective gesture.

Don't be afraid to offer your hand to a magnate or a banker, as you have no reason to hang your head in approaching him. Your voice is oftentimes your best ally. The better command of language you have, the better will your voice be adapted to influence people. In building your talk, select your words with care.

Let your prospect talk, but be sure you hold him to a well-defined line of talk. Keep him upon your ground. It does not always take argument to sell goods, but it most often takes originality and deep, genuine thinking on the part of the salesman. Be prepared to get interest in the face of objections. While getting up interest, don't mention price. Always talk for your prospect's interest. From the very start show that it is for his interest you are working and not for your own alone, that your motive is not a wholly selfish one, that you are not only selling him an interest in your invention, but that you intend to stand back of him with the right kind of service and see that the invention sells. This will be a clincher.

You cannot talk intelligently about an article unless you understand how, when, and where it was made. You cannot always tell whether your prospect is interested simply because he watches you and pays strict attention while you are giving your selling talk. If a question is properly asked, it will give you a fairly good idea of the mental attitude of your prospect, how much he knows, and how he feels about it. You have to go at it single-handed. Don't do all the talking yourself, and don't let him do it all. If he will not talk, fire a battery of questions at him. If he talks too much, take the initiative and don't give him a chance.

You must make your prospect conceive the whole proposition in the early part of your talk. *Never let any man tell you anything about your own goods. You are supposed to know more about them than anybody else, and you must convince your prospect that you do.* When you bring forth something that pleases, the facial expressions will indicate it; if it is something that displeases, you will also notice it. Do not let him put you on a false scent.

In making your approach, make it in such a manner that your prospect does not feel that you are after his pocketbook, that he is expected to buy something. Seventy-five per cent of salesmen fail to get attention because they either do not know or otherwise disregard this simple precept. Your prospect passes judgment on you and your proposition within sixty seconds after he meets you. You must see the necessity of getting on the prospect's side of the fence. In making your approach, consider the temperament of the man, his education, environment, and profession. Determine his point of view in advance, and you will have a better chance of landing him. You must be needle-witted.

Getting conviction is harder than arousing interest. It is the last step in making a sale which wins. You should be able, while giving your arguments, to find the real motive that will pull your prospect across. It is easier to combat a thought before it is uttered than afterward. To get conviction, you must dwell on each point until your prospect is absolutely convinced before you pass to another. If you endeavor to show that your prospect is wrong, you can do it only by argument. If you fail to convince his judgment, you fail

to get action. Conviction is the result of understanding and understanding is the result of knowledge. You must apply this knowledge in a logical manner. Your prospect's questions, his facial expressions, his conversation, will all give you an idea as to what his past experiences have been. They will tell you whether or not it is necessary to use argument.

Be sure you keep him thinking as you want him to think. Be sure you hold his attention every moment. If your invention has no particular advantage over your competitors, you will find it impossible to create a desire on the part of an experienced buyer. Know your talk thoroughly; study your prospect; gauge him carefully; introduce your profit talk tactfully to his notice; build your talk step by step until you have created the right moment to get him to resolve to put up the money.

Whether you intend to make a sale by a personal call or through correspondence, you should classify your prospects. As human nature does not vary greatly, an unfavorable approach will produce an unfavorable decision. After you have found the men who will buy your goods, divide them into groups, arranging the groups so you can get the professional men in one section, the laborers in another, the farmers in a third, etc. You will have to tone your letter differently in each case.

Have a definite business policy in selling your goods. The idea of Wanamaker is, "All may help, none shall hinder." You should standardize the best way in which to sell goods. When you have to hire salesmen, get specialty salesmen, those who are masters of their field. The salesman of an adding machine

cannot sell successfully both to bankers and to retailers; electrical equipment companies find that one man cannot sell both generators and electric light bulbs.

Marshall Field said, "The customer is always right."

You must keep everlastingly at it and push your business. Don't get discouraged. After all, a man gets just what he deserves. If he wants business, he has got to pick it up. Every large and successful advertising campaign has been based on the idea that people will buy if the suggestion to buy is made strong enough.

CHAPTER XX

SIZING YOURSELF UP AS A BUSINESS MAN

THERE is one great reason for your failure to obtain capital to push your invention to a successful termination. It is a lack of detailed knowledge of what steps to take to be reasonably sure. You have been a waiter on Providence. The other hindrances will pale into insignificance beside this one great bar to progress. You must know how; then you can help yourself and will not always have to depend upon others. You must draw yourself up to your full height. If you are sure that you will not make a good business man, choose a good manager, and enlist capital from business men who are good organizers. To secure a good manager is not an easy matter. Good managers are constantly employed and are not looking around for new openings. An inventor should always remember that a business concern with an up-to-date selling organization will probably sell more of the products than a poorly organized company. Thus the total amount of royalty received per year from a large sale of inventions may be even greater under a small than under a large royalty.

As a rule it can be quickly ascertained whether an inventor is a good business man by finding out what his attitude is as to estimating *royalties* and his knowl-

edge as to what enters into consideration in fixing royalties. The sum total of all the pointers contained in this book will not avail the inventor if he fails to understand that royalties are based on a proportion of the net profits which are expected to accrue from the sale of the invention. He must remember that the term "net profit" means the amount which remains after deducting from the gross profits (the difference between factory cost and selling price) the cost of conducting the administrative end of the business. For example, if the factory cost plus royalty of a patented lock is 20¢ and it sells for 50¢, a gross profit of 30¢ is made. But the factory cost is not the true cost. To this figure must be added the cost of doing business, such as office expenses, salaries of officials, cost of advertising, salesmen's salaries plus expenses, and whatever losses are caused by bad accounts. Assume that this amount represents 20 per cent of the selling price, i.e., 10¢. This amount, added to the factory cost, would make the true cost 30¢. In other words, instead of making 30¢, as the gross profit would indicate, the net profit is but 20¢, or $33\frac{1}{3}$ per cent less than the gross profit. That is the way a level-headed business man would view the situation.

No country ever furnished such favorable conditions as this great land of ours for starting a business in a small way and building it up rapidly. One requisite is experience; the other, taste or adaptability. If you have no natural liking for any business and it is out of your reckoning, do not go into it with your own or somebody else's money. It is no credit to waste the other man's money. It will never do to take chances. If you do not understand the

business, you can hire some one who does. The more a man knows, the more confident he ought to be in his own field.

There is no mystery about selling your invention. A man loses force when he lets himself become confused by the bigness or the complexity of the things around him. A young man came from a country town to a great city. He was at first greatly bewildered by the tall buildings. In every business house he entered, he was confused by its extent and complexity. The bigness of things overpowered him and made him feel uncomfortably insignificant. But one day as he stood looking at one of the tall buildings, he reasoned that it was merely a pile of bricks placed one on top of the other. Men like himself had put it up. The *plan* was great; the plan was a thought which enabled him to learn to think. Instantly the mystery of the tall building was gone and the bigness of things ceased to overpower him. He succeeded partly because he had learned that cities are built a brick at a time and that even the greatest of things are not mysterious when we reason them out. He himself had raised up the curtain.

When you are seeking to interest men in starting you in business by furnishing capital, you are trying to sell a part of the future products of your brain for a consideration. If you are a man of the best quality, you will stand squarely on your legs. The better salesman you are, the better are your chances to win. You must understand the fundamental principles of salesmanship and have infinite capacity for details. You have perhaps felt sure that you could not raise the capital yourself. You may feel the lack of knowl-

edge or experience, therefore you must seek help. You can become independent of one kind of work only by learning how to do another kind. You must put every ounce of your energy into the crucible.

Inventing is a business like everything else. The key to your achievement is your ability to wield influence over men. If you want the confidence of men, you must give ample proof that you deserve it. Idle money never made any one rich. You must set it at work. Generally "luck" is merely the result of *foresight* and *nerve*. You must lock the wheel of fortune when it reaches you. Follow your own judgment; as a rule it will be right. The distinction between the successful and the unsuccessful man is that the man of success knows not only the value but the necessity of action. With him to wish is to act.

Pattern your efforts after men who, as inventors, have made good as business men and whose products have founded industries. There is the rub: The vast majority of practical inventions are made by men of whom the public never hears. There should be a way to make them known. Mr. Edison is a type of inventor who has the money idea of any invention. It was pounded into him by very severe knocks. You must have imagination in this line of work — this more than technical experience. Don't be a machine for others all the time. Take all the advantages offered for betterment. Now or never!

If your invention has merit, don't be afraid to push it for all it is worth. The business world is searching with a lantern for men with an original as well as a practical frame of mind. Hold yourself in readiness for your main chance. "The biggest asset of any

big industrial corporation to-day," said the chief of the engineering corps of a great corporation, "is to obtain men of the right sort." "The right sort" is defined as follows: "It is easy for us to get good, faithful, plodding scientists. They all have their place and we could not do without them. *But the difficult thing is to get men who think differently from other men, who do not follow precedent but will strike out new and original lines for themselves. Out of these men, we get our development.*" He is referring to inventors, men who do not tread beaten paths.

Start up and do something, and forget everything else. If you are past your prime and enjoy a good state of health, get started. Have you done the biggest things you are capable of doing? How long have you been just an ordinary employee? Do you realize that habit is getting a tremendous grip on you? Are you just waiting? For what? Orison Swett Marden, whose "Success" books have stimulated many men in different walks of life, says in his book entitled "The Victorious Attitude": "There are thousands of devices in the Patent Office in Washington which have never been of any use to the world simply because the inventors did not cling to their vision long enough to materialize them in perfection. They became discouraged. They ceased their efforts. They let their vision fade and so became deenergized and lost the power to realize them. Other inventors have taken up many such 'near' successes, added the missing links in their completion and have made them real successes." The secret of all this, you will find, is to make a profit from the labor of others. Use your head. It is there for that purpose. Do

both the planning and executing for a while, then let others execute while you provide the sinews of business. This is called "knowledge of the world of affairs."

CHAPTER XXI

ELEMENTARY CONTRACT LAWS

THERE are certain principles of law which every inventor should know and apply in the course of his dealings with financial people in order that no unfair advantage be taken over him by men big in the commercial field. They relate to the making and execution of valid contracts. It is hoped that the inventor will familiarize himself therewith, as there are times when he may not have the opportunity to consult a lawyer.

The rules of law governing contracts are of great importance to the inventor, just as they are to every business man. This consideration of law forms an important part of every discussion of points relative to exploiting inventions. You must know the various ways of interesting capital and their several advantages and objections, because it is in just this connection that a great many inventors make a fatal slip. There have been numerous suits between licensors and licensees owing to misunderstandings of agreements or contracts. Most of these could have been prevented if care had been taken before the contract was drawn to make sure that the "minds of both parties met," as the legal term puts it. Those who make contracts should know law in order to be exempt from mistrust.

In every contract and in every sale there must be an offer and an acceptance. The minds of the two parties to the sale must have met on a specific object. You may agree with your merchant to take a suit of clothes at a specific price. There has been an offer and an acceptance, and the minds of the parties have met. The sale is complete, although no money has yet passed and the suit is not in your possession. The acceptance of the offer must be absolute and in accordance with its terms. In the above illustration, if the merchant offered you a suit for \$35 and you offered him \$30 for it, the contract is not complete and there is no sale, because you are introducing new conditions into the contract. Even if you return later in the day and agree to take the suit at \$35, you cannot, if the merchant refuses, compel performance, as you failed to accept his original offer.

Brown might offer to sell you his house for \$1000. You accept his offer provided he will take \$300 down and your 30-day note for the balance. This is a qualified acceptance and does not constitute a contract.

The Offer must actually be Communicated to the Party Accepting It in order to Meet the Requirements of the Law. — If the offer reaches the second party in an indirect way, the offerer is not bound to perform. Thus A. may offer to sell B. his horse for \$100. B. refuses but tells C. about it and C. accepts the offer. A. is not compelled to sell the horse to C. However, if his offer is made to the public, then any man meeting the requirements of the offer can compel A. to perform.

As a general rule the acceptance must be made in the manner in which the offer is made. If the offer

is made through the medium of a letter, the acceptance should be made in the same way. This also applies to a telegram. If the offer is made by mail and the acceptance is made either by messenger, telegraph, or telephone, provided the means of acceptance is speedier than the mode of offer, the contract is valid. If you accept a contract by mail, it is complete as soon as you mail the letter. Even though the letter be lost, the contract is valid, and the offerer has no right to sell the goods. If he does so, you can compel him to perform or sue him for damages. He may protect himself, however, by stipulating that the contract shall not go in effect until the acceptance has actually been received by him or he may designate a time limit. It practically comes to the same thing. If I offer you a thousand yards of woolen cloth at 50¢ a yard to hold good for ten days, you may accept it at any time within the ten days. If you mail your acceptance on the evening of the tenth day, the contract is binding.

Silence as Acceptance. — The offer may be withdrawn at any time before it has been accepted. However, if it was accepted before it was withdrawn, the contract is complete, even though the offerer has not yet received the acceptance. If a consideration is paid to hold the offer open for specified time, the offerer cannot sell until the expiration of that time.

Rights of an Agent. — If you are acting as an agent of a firm, any contract made by you will be binding on the company, even though you happen to be a minor. If you are clothed with authority to sell certain goods and quote certain discounts and these are accepted by the buyer, the contract is valid and binding although you may orally stipulate that those

figures will be subject to the approval of the house. The mere fact that you are clothed with the authority to quote the discounts and that there has been an offer and an acceptance made in good faith, makes the contract binding.

Consideration. — In order that your contract may be valid, there must be some consideration, although if the contract has been fully performed by both parties, it will not be set aside merely because there is a lack of consideration. The mere fact that you make a promise to give certain articles to another party, is not necessarily binding on you. However, if the gift has already been made, it cannot be revoked.

Valuable Consideration. — The consideration must have real value. It is not necessary for it to be equal to that offered, but in law it must have some value, because it would be impossible for the courts to tell whether or not a thing has the value it is supposed to have. If I am indebted to you for \$100, I might send you \$50 and if you agree to accept this for the account in full, you may later collect the other \$50. However, if I send you \$50 and any article regardless of what its value may be, and you accept it, the claim is considered settled. If you make a promise to extend my period of credit for six months longer after the obligation becomes due, the promise is void unless I pay some consideration in lieu of it.

A contract need not always be in writing except when we deal in lands, where it is an assignment intended to be recorded in the United States Patent Office, and in all cases where the law provides that instruments shall be in writing. However, under the

Statute of Frauds a contract not to be performed within one year must be in writing. The Statute of Frauds also provides that any agreement to answer for the debts or defaults of another must be in writing. If John Brown enters Smith's store and remarks, "Sell to Jones or any member of his family all the groceries he needs and I will pay for them," this contract need not be in writing. But should Brown say, "Let Jones have all the groceries he needs, and I will pay for them *if he does not*," this contract, under the Statute of Frauds, must be in writing.

Fraud. — Where there is real fraud entering into the contract — it makes no difference whether it is on the part of the offerer or the one who accepts — the fraudulent party is liable in tort. If you are a salesman and make a false statement, knowing it to be false, you will be held accountable for it. If you make a false statement believing it to be true, you will not be held for fraud. If the party who has been defrauded accepts any of the benefits of the contract, the court will offer him no redress.

Contracts. — The contract may also be oral. It may be an implied contract. In order to make an implied contract valid, it must be not merely a mental determination on the part of the second party to accept, but must include some action to show that he intends to do so.

Title. — It is important to know when a title passes in a sale. When you go to a clothing firm, select a certain suit, and agree to pay \$35 for it, then as soon as the offer has been made and you have accepted the suit, the title passes immediately, although you have paid no money and have not got the suit. How-

ever, if the firm agrees to alter the suit in any respect, the title to the goods will not pass until such alteration has been made.

Making a Change before Delivery. — Where there is a contract for the sale of specific goods and the seller is bound to do something to the goods before delivery, the title to them does not pass until the change has been made. You may purchase an auto and agree to pay two thousand dollars for it with the stipulation, however, that your monogram is to be painted on the door of the machine or, perhaps, that the tires are to be changed. The title does not pass until such changes have been made.

Sales. — In making a sale by sample, there is always an implied warranty that the goods will be salable and merchantable.

Breach of Contract. — It is not unusual to find a case in which one of the parties to a contract of sale will not perform his part either because it is oppressive or for other reasons. The question then arises: "What are the respective rights of each of the parties under these circumstances?" The purchaser may refuse to perform his part of the contract by declining to receive the goods, or after the goods have been received, by declining to pay for them. In case the title has not yet passed to the purchaser and he has not received the goods and if he still refuses to accept them, the seller may avail himself of either of the three following remedies: (1) He may resell the goods after first actually tendering them to the purchaser; (2) he may hold the goods for the purchaser and sue him for the entire amount of the bill; (3) he may keep the goods and sue for damages to cover the difference between

the sale price of the goods and the market price thereof at the time the contract was made.

Payment. — A check is not legal tender, and the man who takes it in payment of goods, does so at his own risk. If in the sale of goods no place of payment is designated, it is the duty of the purchaser to find the seller and remit to him. A receipt is generally considered evidence of payment.

Power of Attorney. — When a person wishes to delegate to an agent or a representative the right to transact any business which necessitates signing checks drawn against his account or the signing of papers which carry any obligation, he issues to such agent or representative a written power of attorney, a regular legal form conveying to him the power to sign, placing a limitation as to time. Such power of attorney shall be in force as the circumstances of business may require.

If one party agrees to stay with another and give services and the other party does not agree to give payment for services, the agreement is void. A mere contract to sell an invention to a prospective buyer is not an assignment.

Hire your own lawyer. Do not be tied down by onerous contracts. The manufacturer usually insists on his own attorney's drawing any agreement. Consequently, an inventor must be sure that the legal phraseology of the contract follows the oral arrangement already made. Never under any circumstances sign a contract until you have submitted it to competent counsel to whom you should state in your own language your understanding of the arrangement. He will tell you whether the contract follows it and

also whether there is any opportunity for a future misunderstanding owing to the phraseology. To detect any variation will mean a use of the "biter being bit." Any price the attorney reasonably charges is worth the service rendered.

CHAPTER XXII

MISTAKES OF INVENTORS

CHAPTERS could be written on mistakes of inventors and patentees, but a word to the wise is sufficient. In order to gain the ready ear of the inventor it has been deemed advisable to correlate and assemble here *various suggestions* bearing on all the topics discussed in this book. They are so vital and all-pervading that they had best be considered together. The inventor who carries with him the precepts herein mentioned may obtain more momentum for his efforts to sell his invention and may have his eyes opened to undreamed realities.

It is doing the right thing at the right time that marks the successful inventor. The quickest way in which this can be done is to avoid doing the wrong thing at any time. Hence this is a chapter on *don'ts*.

There is no reason for an inventor's failing to obtain commercial success in disposing of his patent at a profit, if he will ascertain what is necessary for success. This is a day of short cuts. If you take the long way round, you will never arrive. You must keep moving. Spend your time and money on money savers rather than on frills. Do not fritter away your money on untried schemes. Always get the advice of a specialist before you entertain high hopes about your invention. Visionaries don't count these days. Most inventors allow nobody enough time to

size an invention up. Don't look for an immediate success unless you are familiar with the points discussed in this book, for every successful inventor exemplifies the precepts revealed. Always follow your better judgment in disposing of your invention. No doubt, you have noticed in your experience that every time you acted against your better judgment you made a mistake. That is to say, when you followed impulse in preference to a cold, calm weighing of facts, you found you were wrong. This is a common experience of mankind. Whenever, in an unguarded moment, you became over-enthusiastic, no doubt you found you were sitting on a barrel of gunpowder.

Some inventions drag along for years without getting to a paying stage and then suddenly make fortunes for their owners when the patent is almost run out. You may find yourself in a similar position. It may happen with one in a thousand, but you may be the lucky one.

There is no recognized body of men known as patent brokers or patent agents who make a regular business of selling inventions. These cannot exist, because such a business would require a diversity of knowledge and quality seldom found in an individual. The selling of a patent requires a very intimate knowledge of the practical side of the trade to which it particularly relates. No man can claim the possession of such an experience in every trade.

An inventor is an optimist, for a pessimist would not invent anything. The great bulk of inventions are improvements which enable a person to do a thing in an easier way. Other inventions are revolutionary. The real inventor is almost always a worthy man,

and he remains honest after being knocked in the head incessantly. Being honest himself, he believes all others honest. Thus he sometimes becomes the victim of an unprincipled promoter; this is the unfortunate part of it.

Often a matter of a fraction of a penny decides the question whether the article will be a commercial success or a failure. All questions of cost must be fully worked out by the inventor so that he will come fully armed at every point with facts and figures, not only for defense but also to carry conviction to the mind of the person to whom he speaks.

The worst possible thing to do is to misrepresent the actual facts or figures. Convince yourself first that your invention will be a success. No inventor who has tried this advance investigating work has ever been sorry for it after, or has failed of success in securing capital when he has exerted himself, especially when his invention has proved meritorious. Don't confuse invention and financeering. To invent is not synonymous with get rich quick. No mechanical system can be operated at a hundred per cent efficiency, as you know, so don't make such extravagant claims.

CHAPTER XXIII

THE SAFETY VALVES OF MARKETING INVENTIONS

THE way to wealth is as plain as the way to market." If depends chiefly on two habits: industry and frugality. Waste neither time nor money, but make use of both. "Without industry and frugality, nothing will do and with them, everything." — Franklin.

"Opportunities exist everywhere for men who are determined." — Governor D. Forrest Richards.

George E. Walsh, a successful inventor, said that in his experience he had been a little over-enthusiastic, but that he did sell inventions. He was glad to sell a game and puzzle outright for \$150, only to find out later, to his great disgust, that had he handled the thing right, it could have been made to net him a hundred thousand dollars which others actually made. He advises the inventor either to make his invention himself or to sell it on a royalty basis. Such cases speak volumes.

An inventor offered an important invention to the largest paper manufacturer. He turned down an insignificant cash offer and accepted a royalty contract which he signed. But imagine his surprise when he found that the company failed to manufacture the invention, and there he was without any remedy or recourse. Here was a typical critical situation, a

lion in the inventor's path. Years and years passed with the situation the same. Suddenly he awoke to the fact that he had failed to specify in the royalty contract the time when the thing was to be marketed. Now there are no sovereign remedies for such cases. By acting prudently you will avoid such troubles.

The stationery of promoting companies is usually all that could be desired; indeed, it is often overawing with its names of officers and references. Usually a handsomely printed pamphlet is mailed to inventors which makes it appear as if the company had handled practically all the successful inventions of the day. In this way, the company gets many patents; some that prove valuable are gotten rid of in numerous ways unknown to the inventor. But enough of such disheartening instances.

There are probably more inventors or would-be inventors at work in this country than there are doctors or lawyers. They turn out tens of thousands of practical and impractical devices, only a small percentage of which is patented. Not all may prove successful, but the money earned on some is incalculable.

The average inventor who wishes to sell an interest in his patent, say a half, quarter, or eighth interest, usually makes an assignment of this to the investor in consideration for so much cash. The procedure is disadvantageous both to the inventor and his partner. It makes, in fact, an undivided and indivisible partnership which leaves either party free to deal with the invention as he pleases without accounting to the other. Now it makes no difference if you assign a one-hundredth interest or a one-half interest

therein. The fact is that either of you can proceed to exploit the invention without accounting to the other. In this condition it is practically impossible to negotiate the rights of either separately, and the whole cannot be sold without the consent of both or all those having an interest. It is a predicament from which reason recoils.

Either party can grant a license or territorial rights to the invention without the consent of the other and without accounting to him for the profits. In so doing, he sells only of his own. Thus the invention, instead of being a monopoly, may degenerate into a competition in which the interests of both are wrecked; or it may be wrecked from your failure to agree upon the manner of procedure. When both parties are reasonable and coöperate fairly, no disadvantage results; but friction is apt to occur and this should be avoided by inventor and capitalist. The way out of it is to place the title in the hands of a trustee, or by incorporating conditions of mutual agreement to sell in a contract of assignment. This mode of contracting for capital is largely confined to cases where capital is sought to perfect inventions.

An invention, however clever, cannot be exploited without expense. Of this the expense of exploiting is greater than the expense of patenting. Outside the crop that grows on the soil, there is no single source which has produced such great wealth for this nation in the past as the patent system. The prime stimulus to invention is reputation. The fact that makes men work at almost anything in the world, when they are men of the proper stamp, is the reaching out for reputation and credit for having accomplished something.

An inventor has imagination. He has high ideals and has people's sympathy. The ordinary run of inventors are well paid; many of them have made large returns. Frederick P. Fish, Esq., one of the foremost patent lawyers in the country, is authority for the statement that inventors as a class are better off than lawyers. There is a reason why they should be. They do financially better than poets, and yet their work is somewhat in the line of poetry.

In the course of a few years a good invention may be superseded by one that is better. An invention may be in a form which is practically worthless until it has been redesigned, reshaped, and reorganized so as to be better adapted to a thousand and one conditions that the inventor very likely does not know anything about.

The bad feature about royalty contracts, which makes an outright sale preferable, is that royalty agreements make it necessary for an inventor to watch the business very closely, and that he usually cannot do.

Financing an enterprise in New York City is not an easy task, as the writer knows from his own experience. He made an invention and put it on the market, but was not acquainted with the best market at that time. It cost him quite a little fortune to get started. You must come armed to withstand a long siege, although it is possible to live economically in the city. The people of New York are very cosmopolitan; as long as a man dresses reasonably well, they care not how he lives when not in sight. A New York banker told the writer, who made a deposit in the former's bank with a view of beginning the market-

ing of his invention, that "every inventor comes to New York attracted to the city like a magnet and thinks that the people will fall for his invention. They do so whether or not there is likely to be a market for the article, because they know that money is plentiful there." Do not think that when you come to this city, your past history and present standing are a sealed book. This is not the case. They will look you up through some commercial agencies or through private sources. While there is plenty of money in New York City for good enterprises, the competition among the latter is very strong.

George M. Reynolds, President of the Continental and Commercial National Bank of Chicago, a leading banker, says: "Nobody can make a fortune by saving money from a salary or from wages. I think I have never accomplished anything big in my life, that my friends have not urged me to take a different course."

A man, to make money, must think for himself. There are always on all sides people ready to give advice. Then there are those who are always seeking advice. It is better to fail once in a while than never to have the courage to succeed. Courage is as much of a necessity to the man or woman who wants to build up a fortune, as it is to a soldier on the battle field.

CHAPTER XXIV

SUGGESTIONS FROM THE AUTHOR ON EVERY PHASE OF SELLING INVENTIONS

1. *After a man once gets the idea that he is capable of bossing instead of being bossed, we say to him he might as well die fighting to be a business man as to die working at some job which to him is nothing but slavery if it offers no means of advancement. Be it far from us to judge a man by his past. Most of us have "Histories." We all do about as well as we can "considering." But from to-day on, things may be different.*

2. *Take a partner. Do your best for two, three, or four years; then sell out and go by yourself. We should like to see you eventually in an entirely independent condition. There is nothing like being your own boss. Plans in this book are intended to pave the way for your success in carrying out that idea. You can coöperate with us. You should find men with practical suggestions to write the ads and letters appropriate to the nature of your invention.*

3. *A good rule for every inventor is, "get it down on paper." This is not only done for the information of others but also for making a point clearer in your own mind.*

4. *When you need aid, first seek a friend, — a friend who is ever ready with a jolly reply, a good story, a happy*

thought. Take such a friend into your confidence. Be very sure of his loyalty first. Study your plans together. You may succeed in interesting him. He may not be cleverer than you, but he can say things which would not be appropriate for you to say about yourself. Two heads are better than one. More than one friend should hardly be necessary. This plan is for one who is inexperienced, bashful, one who hates to take a turn-down. He who is nervy, ambitious, unafraid, courageous should go after the capital himself in any of the ways suggested.

5. Whom should you choose among your friends? Look them over and pick out the one whom you consider loyal, clever, and withal a good talker.

6. Advertising for partners always brings a percentage of replies from investors who have plans of their own, different from yours, perhaps better. This applies also to any of the class we have already referred to as making good seconds to assist you. You will find that they have plans. Listen to them; sift out the bad ideas and accept those that are genuinely serviceable.

7. Thinking is all right, but action only makes for success, just as yeast added to flour makes the dough. Do not be disheartened if your proposition does not succeed right off the reel.

A frequent objection to starting in business is the lack of capital. Possibly your lack of experience in your proposed enterprise has kept you from trying for capital.

8. Perhaps you have tried for the money and failed, have become discouraged and gone back to the old place with a heart as heavy as that of Job in all his misery. That experience should not trouble you in the least. Other men have suffered the same defeat and then turned

it into victory, why not you? If you have suffered defeat and humiliation in this way, there is all the more reason why you should be guided by the counsel and advice of those who know, and thus save yourself further sad experiences of a similar nature.

9. "If you want to succeed in the world, you must make your own opportunities as you go on. The man who waits for some seventh wave to toss him on dry land will find that the seventh wave is a long time coming. You can commit no greater folly than to sit by the roadside till some one comes along and invites you to ride with him to wealth and influence." — JOHN B. GOUGH.

Money raising is a question of a little study, application, and patience; that is all there is to it. Merely a little knowledge, a little trying, a little time, and the thing can be accomplished.

10. The secret of the inventor's success is never-ending application. This has enabled corporations such as the National Electric Light Association, the Western Electric Company, etc., to have inventors' departments.

11. Owing to the European war there have come gala days for the inventor. No other age witnessed such keen rivalry in things mechanical. The inventor must supply the wants of man. It is true that many ideas of the utmost commercial importance are slumbering. We are trying to make the inventor a better business man so as to enable him to help himself in a hundred ways he never thought of. You have but to try. The rewards are great enough.

12. There is only one thing in the word "investor" which distinguishes it from the "inventor" and that is the "s." This "s" stands for "success." Every inventor should understand this from the very beginning.

13. Where an invention can be put to several different uses and can be used in different lines of manufacture, deal with each line separately. In this way the inventor can kill two birds with one stone and sell two complete patent rights while owning but one patent. Thus the manufacturer of flour is not interested in cement, so if the new process of grinding be equally applicable to both, the patent rights might be sold separately. The rights for an improved line reel were sold separately for use as a clothesline holder and for a surveyor's tape, while the inventor still retained rights for other purposes, e.g., as a fishing tackle. The inventor must always consider such possibilities. He cannot assign certain claims of a patent without at the same time assigning the entire patent.

14. The inventor should retain at least a minority interest in the corporation organized to push his invention, even if in addition he has a royalty, this in order to have a voice in the management. If the inventor has taken royalties and does not own stocks, his contract should make proper provision for protecting his interest, e.g., causing the directors to consent to certain actions of the corporation affecting the inventor's interests, such as his right to inspect the books.

15. See that your prices are reasonable. Place a fair price on your invention, and you will do a brisk trade. If you charge an exorbitant price, your sales will be small at the beginning, and it will be difficult to start a profitable business. Besides, high prices excite competition and infringement.

16. Over six hundred million dollars are spent annually in the United States for various forms of advertising. Logical advertising methods in marketing

inventions will always triumph sooner or later. Cream will always rise to the top; water will always find its level. There's no stopping it. The successful man who advertises is no slacker when it comes to spending money to get business. Not he. "The sky's the limit," is his slogan.

17. *If your invention is for use among farmers, the easiest and best way to get them interested is to get up a list of names of farmers with money in any locality you are interested in. Such a list would not cost you more than an average of 5¢ per name. The important thing about this plan is the fact that the farmers you go after are known to have money and you want only them. One way for an enterprising inventor would be to write a letter to the assistant cashier of the bank in the towns you are interested in, offering 5¢ a name for a list of local farmers of standing. When the list comes in, have it copied in triplicate and send a copy to the justice of the peace and the editor of the newspaper in each town asking them to check the list for accuracy and to add any names not listed. For this service there should be enclosed with each letter a check for one dollar.*

18. *To a young office manager came the opportunity to purchase the patent rights of a household specialty. Investigation showed a ripe field for the article. Accordingly he roped and branded his opportunity. He started out right from the very beginning and sent out circulars based on a carefully selected and verified list of names. Each circular brought back orders. Within a month the business found itself. This seeming marvel was accomplished simply by knowing how to compile and handle lists of names.*

19. *Do not forget that for every inventor defrauded*

by the manufacturer there are scores of capitalists who have lost fortunes financing impractical inventions.

20. Eliminate all sentimental feeling in connection with your invention. Be its own worst critic. Adjust your viewpoint towards it so, that instead of its becoming a part of you, as so often happens, you can, figuratively, criticize it through the eyes of your unfriendliest acquaintance. The novice will at times cover up a known defect, refuse to admit it, even to himself, in the hope that no one else will discover it. Get that line of reasoning out of your mind instantly. Every invention has or will develop a competitor. You may be sure he will find the defect. What is the use of deceiving yourself when to do so results to your own misfortune?

21. If the inventor has confidence in the money-making possibilities of his invention, the best plan will be that of operating the invention on a royalty basis. In considering the method the inventor sometimes fails to recognize the fact that a royalty, if sustained in amount year after year during the life of the patent, is the same as having a sum of money invested during the period, which would pay in interest the amount of royalty received. Thus if the royalty amounted to \$500 per year, it is the same as though the inventor had \$10,000 invested drawing interest at five per cent per annum during this period.

Licensees do not need exactly to ascertain the precise validity of a patent, for they are not buying the rights. They are merely buying the use of the invention. Still they will want to know whether the invention can be used without infringing other and existing patents.

22. The seller should not be required to guarantee the validity of any patent. That the patent is valid should be taken for granted by the parties and therefore

placed at the commencement of the deal among the recitals. Even the United States Government does not guarantee the validity of every patent it issues, so why should the inventor do this?

23. Size, shape, finish, and even the kind of container have a marked influence on the successful distribution of many patented articles. When distribution to the consumer is largely through middlemen or jobbers, suitable size, pleasing shape, and handsome finish are frequently the deciding factors between two articles apparently equally operative and selling at about the same price.

24. Sometimes, after experiment on a model, the entire nature of the invention is changed. We have in mind an inventor who, after the expenditure of much time, thought and money, evolved a successful smoke consumer which, by a not entirely unnatural process in a model building became an improved furnace feed. Then by a very singular change, the former smoke consumer came out triumphantly from all the experiments as a very effective gas stove. This was patented, manufactured, and put on the market with much success.

25. Investors object that the largest interest in an invention enterprise goes to the promoters. Some years ago a valuable little invention had been perfected and was ready to be placed on the market. The inventor offered it to some promoter friends for \$25,000 worth of stock of the company they were to organize. Had these friends been reasonable, they would have capitalized it at a figure somewhat commensurable with the amount to be paid the inventor, and the invention would have attained the success it merited. But the promoters promptly capitalized the enterprise on the unwarranted

basis of \$100,000. Of this amount \$25,000 was to go to the inventor and \$25,000 to be sold for working capital. The remaining \$50,000 worth of stock was to come to themselves. The enterprise naturally came to grief, not from any lack of merit, but simply because the overcapitalized offering was not attractive to men with money.

26. If a manager is to give his time to the operation of the business, a demand for reasonable salaries or stock compensation is fair.

27. Six or eight-line "ads" are as a rule worse than useless. The only responses in many cases come from people who offer to find capital for the advertisers. They are not reliable, as the writer found when he tried this expedient in New York City. Do not appeal to the houses that advertise they can secure capital. They want advance fees, always demand money. If the enterprise is not incorporated they will tell you to incorporate. If it is already incorporated, they suggest reincorporation. They tell you to get an issue of bonds and to take out foreign patents. They all want retainers.

28. Does advertising pay? There are around two million stores in the world to-day, and three fourths of them advertise. It does not seem likely that they would pay for something of no value. There are over one million periodical publications in the world, ninety-nine per cent of which are supported by advertising and could not exist without it. Are they receiving money for something of no value? We do not think so. The larger city papers carry columns of financial advertising every day, most on Sunday. Many of them have several pages of such notices. One page costs for one time from a thousand dollars down. Investors read the papers

and look for opportunities, just like the rest of us mortals. Investors want more money, because the more money one gets, the more uses he finds for it and the harder he will try to obtain it.

29. The successful inventor is not a one-idea man. He must be on the watch for "something better" all the time until he and his expert advisers are convinced by actual tests in actual service that the invention is absolutely right in every way. The successful invention of to-day dominates its particular field. Why? Because it is better than others.

30. A patent may be wholly without value during its life. Then some economic change may occur after it expires which will render the unprotected invention of great value.

31. Some patented inventions are purchased even though they are of no commercial value. Their only value lies in the fact that they contain some ideas which, combined with other ideas, will result in an entirely new machine.

32. A patented article often has a secondary value to a manufacturer. This lies in the advantage the public finds in patented articles. They prefer to buy these goods, and while they really give more money for them than for other goods, still the maker is able to sell a line of goods below the market price because of this increased patronage.

33. Edison says that most large firms prefer to buy a patent outright. We quote: "Although I have taken out more than a hundred patents, I never had more than one under a royalty agreement that I recall."

INDEX

- ACCEPTANCE, necessary to offer, 197, 198
 silence as, 198
- ADVANCE investigation, when necessary, 206
- ADVANTAGES, tabulation of, 36
- ADVERTISING, capital raising by, 110
 lack of effective, 110
 newspaper, 168
 promoter sharks, method of, 152, 153
 quickest method of, 167
 retail dealer, 84
 when to enlist service of expert in, 162
- AGE, success independent of, 57, 58
- AGENCIES, fostering and selling inventions, 125
- AMERICA vs. EUROPE, after-war conditions, 86, 89
- AMOUNT of money needed governs costs of replies, 170
- APPROACH, how to make toward prospects, 188
- ARGUMENTS, answering, of competitors, 35, 36
- ARTICLE, condition of, influencing demand, 62
 factors of which influence demand, 61
- ASSIGNMENTS, conditions and formalities of, 166
 example of, illustrated by paper-box, 131, 132
 outright sale of patent by, 130
 protective provisions of, 131
- ATTENTION, how to get, of prospect, 187-188
- ATTITUDE, getting, of prospects, 95
- ATTORNEYS, royalty contracts should be drawn by, 133
 when indispensable to inventor, 164
- BICYCLE taken as object lesson in claim writing, Chapter 5
- BOARD OF DIRECTORS, importance of choosing good, 179
- BONDS AND SHARES OF STOCK, difference between, 181
- BURDEN of proof of showing merit, 108
- BUSINESS, fit for, men must be, 190
 invention must be pursued like, 22
 knowledge, inventor should gain, 192

- law, necessity of, to inventor, 96
- selling invention is a, 28, 29
- subjects inventor should be familiar with, 104
- working up, in inventions, 120
- BRANDEIS, JUSTICE, and opinion on inventions, 60
- CALL, making personal, to explain invention, 116
- CANADA, means adopted by, for scientific research, 125
- CAPITAL, confidence necessary to raise, 55
 - obtaining, from small beginnings, 29, 30
 - prospectus to raise, when necessary, 121
 - raising, not hard, 105
- CAPITALIST, eager to invest in right article, 57
 - should pay expenses of a model, 51
- CAPITALIZATION of corporations, 175
- CAPITAL STOCK, when issued, full paid, 182
- CAUSES of failure to raise capital, 110
- CITY, demand creation as affected by, 64, 65
- CLAIMS, broad *vs.* specific, 42
 - broad should not be too sweeping, 45
 - definite, example of, 47, 48
 - definition of, 41
 - excessive, should be avoided, 111
 - function of, 41, 42
 - good, protect, 2
 - misleading, also misdescriptive, 46
 - operative structure defined by, 44
 - redundant, example of, 49
 - theory of, 6
- CLASSES who invest, 112
- CLASSIFYING buying public, 136
- COMMERCE, after-war preparation for extension of, 87, 89
- COMMERCIAL AID, necessity of, for contracts, 164, 165
- COMMISSIONER OF PATENTS, 60
- COMPETITION, is always present, 79
 - competitors' point of view in, 35, 36
 - good for business, 73
 - merit *vs.*, 3
 - patent claims and, 2
- COMPETITORS, estimating number of, in given locality, 63
- CONDITION, assignment in contracts, 165-166
 - control of corporation obtained by, 177, 178
- CONFIDENCE, inventor should have, 102, 103

- inspiring, 111
- success obtained by, 56, 57
- CONFLICTING IDEAS, shutting out, from prospects, 188
- CONSIDERATION in contracts, 199
- CONSUMER decides market for article, 70, 71
- CONSUMPTION of articles, special factors controlling, 69, 70
- CONTRACTS, assigning inventions, 163
 - consideration, 199
 - corporation organized under, 177, 178
 - law of, 196
 - partnership, 172, 173
- CONTROL OF CORPORATIONS, how given, 176, 177
- CONVICTION, how to instil in prospect, 188
- COÖPERATION between inventor and investor, 38, 59
- CORPORATION, conditions of starting, 177-178
 - kinds of, 174
 - when desirable, 182
- CORRESPONDENCE, interesting people by, 159
- COST, estimating of inventions, 81, 14, 15, 16
 - of models, 17
- COURAGE of conviction an asset, 211
- COURTS, attitude of, on price fixing, 72
- CREATING demand for inventions, 61
- CRITICS, inventor should listen to, 72

- DEALER must be kept supplied with article, 52
- DEFECTIVE PATENTS, 10, 11
- DEFINING limitations in claims, 7
- DEMANDS, necessity of, for invention, 61
 - should regulate supply, 62, 63
 - trade conditions influenced by, 75
- DEMONSTRATION, necessity of, 52
 - personal, 126, 127
- DEPRECIATION, 19, 20
- DEVELOPING inventions by a regular stage of operations, 53, 54
- DISTRIBUTION, of patented articles in foreign countries, 90

- EDISON, inventors should pattern after, 193
- EDUCATING the public as to fixed prices, 72
- EFFECTS, evil, of partnership agreement, 173, 174
- ENFORCEMENT of resale contracts, 72
- ENTERPRISE, questions affecting, 98, 102
- EQUIVALENTS, how claims cover, 46

- ESSENTIALS of partnership agreement, 172, 173
ESTABLISHED BUSINESS, needing money, 156
ESTIMATING, cost of introducing article to public, 82
 price and cost generally, 15
EXAMINERS, Patent Office, 5
EXCHANGE, value of assignment, 135
EXCLUSIVENESS, essence of, in patents, 1
EXHIBITION, demonstrating inventions at, 127
EXPENSE, estimate of, for starting factory, 704
EXPERIENCE and knowledge, necessary to win out, 119
EXPERIMENT, manufacturer's article is first an, 77
EXPERTS, who are, to pass on merit, 23, 24
EXTENSION of foreign trade, remedy for overproduction, 87
- FACTORS, determining price of invention, 3
 furnishing talking points about inventions, 38
FACTORY, overhead expenses in, 78
FAILURE, to raise capital, 110
 to obtain replies from ads, 170, 171
FINANCIAL ADVERTISING pays, 168
 assistance, inventors need, 51
 men willing to back sound enterprises, 114
FIRMS, big, buy up inventions, 58
FIVE-AND-TEN-CENT ARTICLES and the market therefor, 12
FIXED PRICE, who gets the benefit of, 72
FOLLOW-UP LETTERS, how to be prepared, 151, 160
FORM and substance of prospectus, 123
FORMULA for ascertaining sale of an article, 61, 62
FORTUNES, made on simple inventions, 25, 26
FOUNTAIN PENS, featuring talking points of, 38
FRAUD, when it vitiates a contract, 200
FUNDS, raising, what to consider, 104
FUTURE, big firms cash in on, 62, 63
- GLOVES, taken as example of sales opportunities, 63, 70
GOOD WILL of capitalist, necessary to gain, 109
- HELP, how to use, of others, 58, 59
 self-, requires training, 58, 59
HONESTY of inventors, 205, 206
- IMPLIED licenses, nature and character of, 165
IMPORTS, increase of, since the war began, 85

- IMPRACTICABLE structure, example of claim covering, 49-50
- INCOME, of inventors, 240
- INCORPORATION, essentials of, 182
- INEXPERIENCED INVENTOR, how he proceeds, 149
- INFLUENTIAL MEN, when they join with inventors, 157
- INFORMATION, investors want full, 101
 which must be supplied, 95
- INFRINGEMENTS, theory of, as defined in patent claims, 6
- INITIAL OUTLAY, get investor to make, 141
- INJURY, caused by price-cutting, 72
- INSURANCE MAN, when to use services of, 161, 162
- INTERNATIONAL RELATIONS after the war, 89
- INTEREST, in corporation, fixing by shares of stock, 175
 in corporation, investors want, 147
 undivided, 208, 209
- INTERESTING men of special knowledge in inventions, 156, 157
- INVENTIONS, dependency of various, 32
 difference between simple and complicated, 30, 31
 six cardinal tests of, 11, 12
 protecting inventions, 8, 10
- INVENTORS, capitalists should coöperate with, 51
 places where they flourish, 76
 position of, in world of affairs, 108
- INVESTIGATIONS, investor wants time for, 69
 work, necessity of for inventor, 206
- INVESTMENT standpoint, royalties regarded from, 74, 75
- INVESTORS, why they fail to back inventions, 114
- JOINT OWNERS, of undivided interest, advantages, 136
- JOINT OWNERSHIP, how to overcome obnoxious features, 36
- LABOR of others, utilizing the, 106
 saving machinery, will attract investors, 115
- MAGNETISM, personal, necessary for success, 57
- MAILING LISTS, how to compile, 137
- MANAGEMENT, merit in article calls for good, 29
- MANAGER essential to business, 122
- MANUFACTURER, as a prospect, 73, 74
 cutting out, in selling article, 39, 40
 inventor should be, 117
 on lookout for good articles, 106
 prospect, handling the, 144
 what he considers in buying patents, 4

- MANUFACTURING, estimating the cost of, 104
- MARKET, adjustments to conditions of, 87
 enlarging, for groups of articles, 91
 must be considered before applying for patent, 80
 necessary to create, for inventions, 62
 practical considerations of, 11
- MEN OF AFFAIRS, capitalists are, 115
- MERIT, buyers' and sellers' views on, 24
 prerequisite in modern times, 27
- MODEL, after making, first thing to do, 53
 cost of, 17
 putting, in trim, 52
 should be simple and inexpensive, 52-53
 when impractical to make, 52
 when, should be made, 51
- MODEL MAKER may assist in making estimates, 17
- MONEY, good inventions have made, 48
 in bank, do not expect investors to put, 146
 partnership, kept intact, 171
 plenty of, for investment, 113
 spending, to get initial results, 110, 111
- MONEY QUESTION, talking over, with investor, 142
- NAMES of possible prospects, where to get, 137, 138
- NET PROFIT, figuring it up, 190, 191
- NEW CONCERN better than old, to push inventions, 130
- NEWSPAPER advertising, of inventions, 128
 placing an ad for capital in, 167, 168
 Sunday, when good to patronize, 169
- NEW YORK CITY, financing inventions in, 210, 211
- NOTICE, newspaper, how to get it, 128
- OFFER, and acceptance in contracts, 197
 must be communicated to bind, 197
- OFFICE, visiting business men in, 116
- OPINION, of inventions, who are entitled to render, 24
 rendered on merit of invention, 24
- OPTIMISM necessary to success, 57
- OVERCAPITALIZATION, when necessary, 179, 180
- OVERHEAD, how it enters into price, 18
- OVERPRODUCTION, remedy for, 87
- OVERSTATEMENT should not be made in prospectus, 12

- PARTNERSHIP, more wieldy than corporation, 171
 - when best to push new article by, 155
- PARTNER, example of unsophisticated, 173, 174
- PATENT ATTORNEY, service to be required of, 8
- PATENT BROKERS, 25
- PATENT OFFICE, and patent attorney, 5
 - recording assignments in, 116
- PATENT SHARKS and their methods, 152, 153
- PATENTS, establish boundaries, 5
 - foreign, advantages of, 90
 - greatest source of wealth, 92
 - model should come within terms of, 53
 - prices of, 14, 15, 16
- PAYMENT, made to promotors, 179
 - under contract law, 19
- PERSONALITY necessary in business, 110
- POLICY, business, inventor must have, 99
- POORLY constructed model, 143
- POSITION of inventor in world of affairs, 108
- POSTMASTER, how he revises mailing lists, 21
- POWER OF ATTORNEY, how made and effect, 2
- PRACTICAL MAN, always choose, 173
- PREFERRED STOCK *vs.* bonds, 177
- PRICE OF PATENTS, danger of overestimating, 16
 - making due allowances, 16
 - what determines, 14, 15
- PRINTED MATTER as means of broaching new article, 129
- PRIOR PUBLICATION abroad, 90, 91
- PRODUCERS and price-fixing, 72
- PROFESSIONAL MEN who make promotors, 54
- PROFITS, earned on inventions after patent expired, 91
 - forestalling, 181
 - inventor should talk to investors, 64
 - made on staple articles, 107
 - selling surplus goods, 188
 - post-patent, 83
- PROHIBITION of price-fixing methods, 72
- PROMOTER SHARKS, advertisements of, 152, 153
 - part played by, in organizing corporations
- PROPERTY, nature of patent, 92
- PROSPECTS, classification of, 188
 - interest, talk in favor of, 187, 188
 - must be made to think right, 186

- PROSPECTUS, appearance and contents of, 122
 how to emphasize statements in, 121
 patent should accompany, 121
 things to be considered in, 121
- PROTECTION of good will by price-fixing, 72
 patent, necessity of, 93
 when a patent really protects, 10
- PUBLIC, are not fools as is supposed, 71
 educating the, in merits of article, 39
 vs. private promoting of enterprises, 151
- PURCHASERS of patents and defective patents, 9
- PUSHING AN ARTICLE, three factors which govern, 12, 13
- QUALITIES a partner should possess, 171, 172
- QUESTIONS, affecting demand for inventions, 62
 covering every feature of enterprise, 98, 102
 investor may ask, 103
- QUICKEST METHOD of succeeding is by advertising, 167
- RAISING capital, not as hard as it looks, 105
 how inexperienced inventors proceed, 149
- RANK, of inventor in world of affairs, 108
 of rival manufacturers, 67, 68
- REASONING of the price cutter, 84
- RECORDING assignments in Patent Offices, 72
- REDESIGNED, many inventions have to be, 210
- REFERENCES, when to submit Patent Office, 106
- RELATIVES, when to be approached in financing inventions, 74
- REMEDIES for breach of contract, 201, 202
- RENT, payment of by investor, 36
- REORGANIZATION of corporation, to fix value, 176
- REPLIES, cost of newspaper, average, 170
 from classes of advertisers, 170
- REPUTATION, inventor strives for, 209
- RESALE PRICE, 5, 72
- RESERVE FUND, maintaining a, for patent depreciation, 20
- RETAILING of simple five and ten-cent articles, 13
 when good to sell patent to a retailer, 39-40
- RETAIL STORES, patented articles require outlet through, 82
- RIDICULE, subjecting the inventor to, 107
- RIGHT to use an article in conjunction with another, 165
- RIGHTS, of an agent, 198, 199
 how prior, are innocently defeated, 91

- RISKS of manufacturers, 106
- ROYALTIES, basis upon which are estimated, 101
 - factors influencing amount of, 75
 - when small, are preferable, 74
- ROYALTY contracts require watching, 210

- SAFETY RAZOR under hammer of perfection, 30
- SALES, contract of, passing of title under, 16
 - total normal quota of, 67, 68
- SALES-LETTERS, equivalent to salesmen, 83, 84
 - how they should be prepared, 129
- SAVING of cost where pennies count, 206
- SCIENTIFIC RESEARCH, 125
- SCIENTISTS, 3
- SELECTION, of newspapers in which to advertise, 169
- SELLING ARTICLES, how a sale is made in the mind, 184, 185
 - obtaining the right attitude of prospect, 185
 - prospect's interest, talk in, 185, 186
- SELLING MECHANISM includes jobbers, dealers and inventor, 78
- SHARING control of new enterprises, 145
- SHOP RIGHTS explained, 134
- SHORTSIGHTEDNESS of learned men, 107
- SHOW WINDOWS, personal demonstration in, 127
- SILENCE, as acceptance in contracts, 198
 - examples of simple inventions, 25, 26
- SIMPLICITY, as attested by some good sellers, 13, 14
- SMALL INVESTORS, 160, 161
 - manufacturer, 62
- SOLICITING, personal, to interest others in invention, 158
- SPECIALTY SALESMAN, operations of, 91
- SPREADING OUT in selling policy, 26
- STAPLE ARTICLES *vs.* patented articles, 39
- STATEMENT of invention, how received when oral, 68
- STATUTE OF FRAUDS, in regard to sales, 200
- STOCKS *vs.* bonds, difference between, 77
- STOCK-SELLING, how to facilitate, 182
- STUDY DEPARTMENTS of big firms, 62-63
- SUCCESSFUL OPERATION, how inventions stand the test of, 31, 32
- SUGGESTIONS, making proper use of, 141, 142
- SUNDAY NEWSPAPER advertising, list of papers, 169
- SUPERIOR article, what makes an article a, 28
 - feature conferring merit in, 29, 30
- SUPPLY of article must be steady, 71, 72

- TALKING POINTS, of articles in general, 35, 36
 of inventions, 35, 36
- TERMS and stipulations of promoters' agreement, 63
- TERRITORIAL rights, selling advantages of, 134
- TESTIMONIALS, obtaining, to boost inventions, 29
- THOUSANDS of inventions made yearly, 32
- TIME to develop ideas, 22
- TITLE, when it passes under contract, 200, 201
- TONE and individuality of sales letter, 159
- TRADE, exhibits, demonstrating in, 127
 extension of, after the war, 89
- TRAINING, necessity of, for success, 56, 57
- TRAVELING SALESMAN, when to obtain coöperation of, 145
- TYPES, of corporations, 174
 of inventions, 30
- UNDIVIDED interest bugaboo of assigning, 208, 209
- UNITED SHOE MACHINERY Co., policy of, ground for its prestige, 110, 111
- USE OF INVENTIONS, instances of, 15
 may furnish talking points, 38
 value of, 14
- USING SERVICES of others, the advertising man, 162
 the insurance man, 161
 the lawyer, 162, 163
 the reporter, 161
- VALUE OF INTEREST, in undertaking, 176
- VICTIMS of unscrupulous promoters, 26
- WANTS of America, to come first after the war, 24
- WAR, trade extension after the, 2
- WATCHING, royalty contracts require, 210
- WORK, invention should be put to, 119
- WORKING INVENTION, money needed for, 134, 135
 under patent license, 68
- WRITING, contract must be in, when, 200

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